FLORIDA WILDLIFE®

Volume 40, Number 2

March-April 1986

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FLORIDA WILDLIFE®

Volume 40, Number 2

March-April 1986

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THE COVERS

With summer's lazy days fast approaching, taking a cane pole to a favorite fishing spot will be a favorite activity for many Florida youngsters, as suggested in our front cover photograph by John Waters Jr. Our back cover shows a hen turkey, photographed in the wild by William A. Greer.

FLORIDA WILDLIFE (ISSN 0015-4369) is published bimonthly by the Florida Game and Fresh Water Fish Commission, 620 South Meridian Street, Tallahassee, Florida 32301. Second-class postage paid at Tallahassee, Florida. Post Office Publication Number 202440. MATERIALS IN FLORIDA WILDLIFE include copyrighted materials which are property of individual contributors. Written permission to use the publisher's materials will be granted routinely by the editor for noncommercial, public informational purposes. MANUSCRIPTS AND PHOTOGRAPHS are received only with the understanding that the publisher assumes no responsibility for any loss or damages. Contributors should request "HOW TO SUBMIT" before sending materials. SUBSCRIPTION PRICES (sales tax included) are: $7 for one year (six issues); $14 for two years (12 issues) and $20 for three years (18 issues).

THE JAKE OR THE LOUDMOUTH?

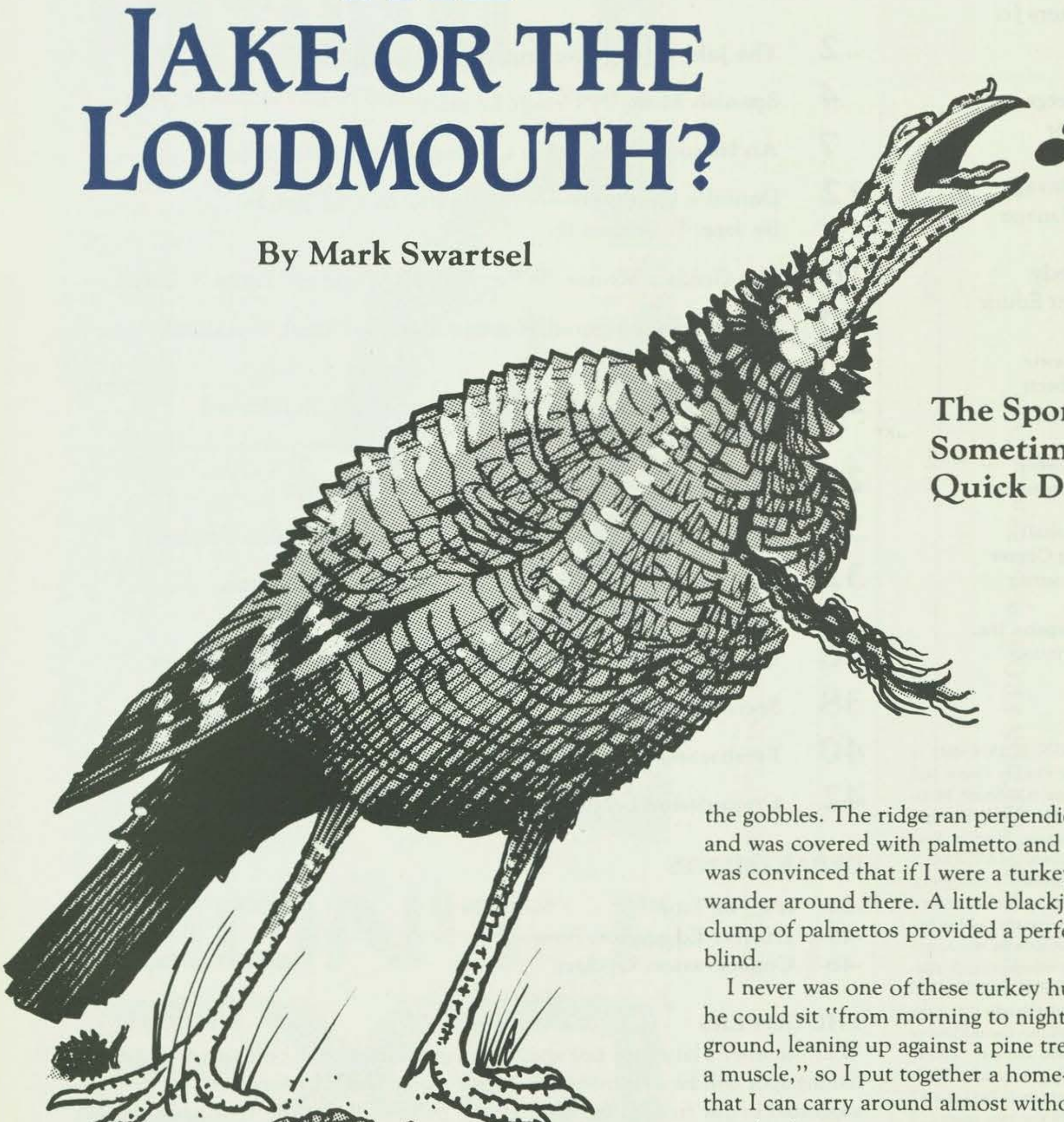
By Mark Swartsel

The Sporting Life Sometimes Demands a Quick Decision.

For a couple of weeks, I had been scouting the area where I planned to sit that ideal Saturday morning. There had been fresh gobbler tracks there on several occasions, and I knew it was only a matter of time until my schedule would coincide with the gobbler's and we'd end up together.

Two different evenings, while listening for a gobbler to talk back to a hoot owl, I heard a turkey sound off somewhere down in a cypress slough. I had been gobbler hunting several mornings that spring, and although my *yelping, clucking, putting* and *whistling* had produced a number of responses, I hadn't been able to coerce any of those stubborn red-headed birds to leave their flocks and check me out. I thought I sounded as much like a love-sick hen as you can get, but evidently they figured four or five pretty little hens purring in the hand were better than one in the bush.

The spot I chose was along a sandy oak ridge that came off the cypress slough where I previously heard the gobbles. The ridge ran perpendicular to the slough, and was covered with palmetto and pine flatwoods. I was convinced that if I were a turkey, I'd sure want to wander around there. A little blackjack oak in front of a clump of palmettos provided a perfect setting for my blind.



I never was one of these turkey hunters who swears he could sit "from morning to night on the cold, wet ground, leaning up against a pine tree and never moving a muscle," so I put together a home-made turkey blind that I can carry around almost without realizing I am carrying it.

To make it, I took a half-dozen coat hangers and straightened them out, then formed a little loop in each end and hooked them end to end so they can be folded up together. A 10-foot x 30-inch piece of camouflage netting, with one edge sewn around the coat hangers, allows it to be folded too, so that the whole assembly wraps up into a one-inch-diameter by 30-inch-long piece. A couple of pieces of electrical tape wrapped around it and my shotgun makes it easy to carry the blind with almost no effort.

To set up the blind, all you have to do is cut a few small limbs to hold it up, stick them in the ground around you, unravel the netting, hook it on the limbs. A few palmettos stuck around the outside allows you to move a little when your legs get stiff or to change positions when you need to. An old, drab-green boat cushion provides the finishing touch. If you add a bottle of pop and a candy bar, you can sit there forever.

That particular morning wasn't exactly getting off to a roaring start. Although I *thought* I heard a gobble at the crack of day—while I was cutting palmettos for my blind—it could have been just my imagination. Any serious turkey hunter, at least once, has had his mind conjure up an imaginary gobble to get himself excited until he might hear the real thing. Other than that, the closest thing to a genuine turkey gobble I could hear was a woodpecker knocking on an old dead tree somewhere.

I started yelping a soft tree-yelp around 5:45 a.m., slowly progressing to some putting, clucking and purring, then some loud yelps, long yelps and short yelps. I was making some sounds my Tom Gaskins Box Call didn't know it could make, all without response—unless you count the two blue jays that were feeding around me. They kept looking at me like I was the craziest thing they'd ever seen. With my camo headnet, camo gloves and full camo outfit, I must have looked like a talking bush to them.

Finally, about 7 o'clock a gobbler sounded off from the direction of the slough. I figured the run of yelps I had just made must've made his wattle stand up. For the next 30 minutes, we carried on one of the most intelligent conversations a hunter and turkey ever had.

I'd give a call on my box yelper I hoped would say, "Hey, Big Boy! I'm over here! Why don't you stroll on over this way?"

He'd answer back with a gobble.

It sounded as if he was 100 to 150 yards away, walking back and forth, but definitely not getting any closer. I wasn't sure if he had hens with him, or if maybe there was a thick area somewhere between us, or if I just hadn't hit the right combination of clucks, purrs and yelps. Whatever it was, he was holding his ground.

About 20 minutes went by without one peep out of him. Experience told me either he had hens with him and wasn't planning on coming my way, or he was walking my way, busy looking for me, and didn't want to make too much noise in the process. My hunch was he wasn't coming. His last gobble seemed a little farther away and I figured he had *vamoosed*. I'd made up my mind that was the case, anyway, because my heart had slowed down to only 100 beats per minute, and my excitement had subsided to a manageable level.

As I looked down and started another yelp, I subconsciously made it a little louder and longer, still thinking he was farther away. Before I could finish that yelp, that turkey gobbled so loud and so close that I completely lost all self-control. I dropped my caller, my heart stopped and my head jerked up.

It scared me so much I started to "black out"—the way you do when you jump up out of bed from a sound sleep. He sounded as if he was right in the blind with me, but as it turned out, he was about 30 yards away, on the other side of some scrub oaks; he couldn't see me and I couldn't see him. That gave me a moment to start breathing again.

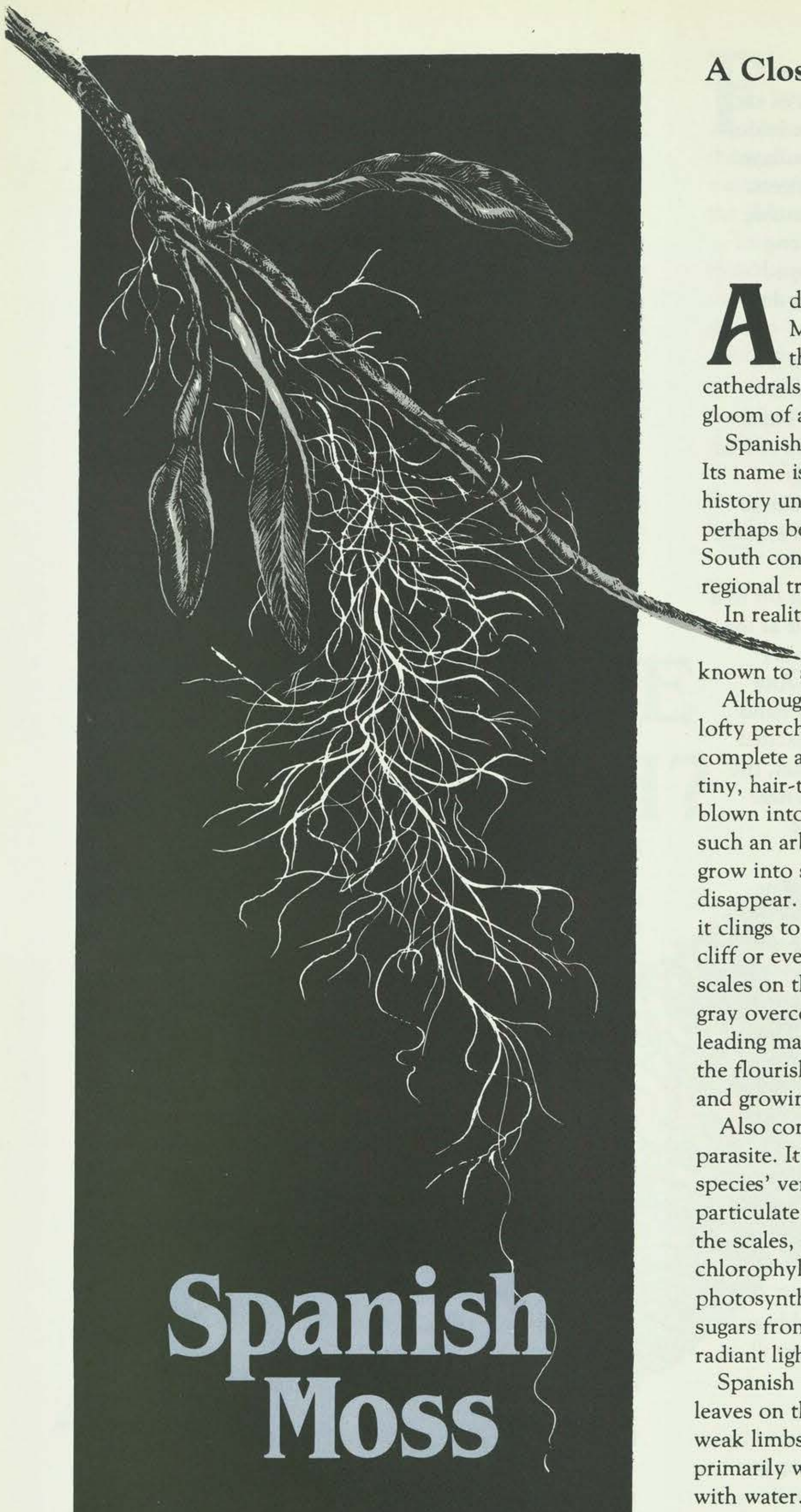
Since I didn't have to ease my yelper down, because it was already in the dirt, I slowly reached for my shotgun and eased it up to get into shooting position. In only a matter of seconds, a big black form with a red head began to take shape in an open area in front of me. It appeared to be a young gobbler, and as he turned sideways, I could see a small beard that was sticking out only about three inches. I knew that one couldn't be the loudmouth that wanted the whole woods to hear him!

Sure enough, behind the young jake came another gobbler, only this time, I wasn't sure if it was a gobbler or a buffalo, it looked so big. The only thing that gave it away was the deep red neck and almost pure white on the top of its head. The skin on his neck gave way to feathers that shined with every color of the rainbow in the early morning rays of sunlight. As he walked to the clearing, I could see that his beard was at least 10 inches long.

The younger gobbler proceeded to feed around the clearing and eventually went behind some palmettos. It's difficult to shoulder your gun to fire when there's more than one turkey in sight of you, because if either one sees even the slightest strange movement, they have a way of disappearing faster than a ghost. A true turkey hunter knows if you can't get a clean head-shot on a turkey, you may as well take your shotgun and shoot both barrels into the ground because you'll stand just about as good a chance of getting him.

With only the "monster" in front of me, I just had to wait until he moved behind something so I could get my gun the rest of the way up and draw a bead. It seemed like days before he stepped out from behind that little oak he'd gone behind, but when he did, I fired. My first reaction was to run to him, but what happened next made me hesitate.

Suddenly, from behind the palmettos, the younger gobbler came running out—about 90 miles per hour—and headed straight for me. Now, in my younger days the temptation to shoot that second bird may have been too much. But with experience, I've learned it's better to save that other one for another day. I get a lot more satisfaction from knowing there's another one out there to hunt, and I had my prize gobbler for that day.



Spanish Moss

A Closer Look at this Living Symbol of the South

By George Leposky

A deserving candidate for the title of "Florida's Most Misunderstood Plant" is Spanish moss, the enigmatic tapestry which enshrouds forest cathedrals and invests townscapes with the gracious gloom of a Victorian parlor.

Spanish moss seems almost to invite misconception. Its name is spurious, its characters unique, its life history unconventional. Despite these attributes—or perhaps because of them—residents of the lowland South consider Spanish moss a distinctive and beloved regional trademark.

In reality, Spanish moss is neither Spanish nor a true moss. It belongs to the pineapple family, known to scientists as the *Bromeliaceae*, the bromeliads.

Although many other bromeliads also take root on lofty perches, Spanish moss has made the most complete adaptation to a nonterrestrial existence. Its tiny, hair-tufted seeds are dispersed by the wind and are blown into cracks in the bark of trees. Upon lodging in such an arboreal cradle, the seeds may germinate and grow into shoots several inches long, then their roots disappear. As each shoot falls or blows from the cradle, it clings to any support it can find—a tree limb, a rocky cliff or even a telephone wire—by means of specialized scales on the outside of its stem and leaves. This fuzzy gray overcoat gives the plant a moribund appearance, leading many people to the incorrect assumption that the flourishing moss they see is dead, rather than alive and growing.

Also contrary to popular belief, Spanish moss is not a parasite. It relies on its hosts only for support. This species' versatile scales absorb nutrients from particulate matter from the air and rainwater. Beneath the scales, a green inner core of cells contains chlorophyll pigment—which all higher plants use in photosynthesis—that plays a role in the manufacture of sugars from water, carbon dioxide, other chemicals and radiant light energy from the sun.

Spanish moss can injure its host trees by shading out leaves on the host's lower branches and by burdening weak limbs to their breaking point. This happens primarily when rains weight down the Spanish moss with water. Occasionally, Spanish moss will grow thick enough on a tree to smother it, and once the tree is dead, the Spanish moss eventually dies—perhaps for want of the moisture given off by the live tree.

A mature Spanish moss plant consists of a single threadlike stem up to 100 feet long, but you're unlikely to ever see one plant of that length growing by itself. The species naturally grows in convoluted clumps containing many plants of varying lengths. Along each stem, narrow triangular leaves one to three inches long protrude at regular intervals. Stem segments with a leaf or two may break from the main plant and be wafted to a new mooring, where they can begin fresh clumps. Hurricanes and other wind forces spread Spanish moss far and wide in this fashion.

Between April and June, tiny buds form at the bases of the leaves. The buds open into three-petaled flowers that are just half-an-inch long and a quarter-of-an-inch wide. On still nights these yellow-green blooms exhude a faintly sweet fragrance. From each blossom, an inch-long seed pod swells. It ripens and splits into three parts, launching hundreds of tiny parachute-bearing seeds to start the next generation.

One might think a plant dependent upon the vagaries of wind and anchorage for survival must lead a rather chancy existence, but the broad distribution of Spanish moss testifies to its success. The species thrives from coastal Virginia through the Southeast to Texas, in Mexico and the West Indies, and as far south as central Argentina and Chile. It grows with equal contentment at altitudes from sea level to 8,000 feet in cypress swamps, live oak hammocks, hardwood river bottoms, bayous, rocky dry hillsides and in the Argentina pampas.

Across its range, Spanish moss has acquired a hefty collection of local names, including *tree moss*, *Florida moss*, *long moss*, *crepe moss*, *wool-crepe* and *old man's beard*, as well as at least 22 scientific names. The first, *Tillandsia usneoides*, was bestowed in 1762 by the Swedish botanist Linnaeus and is quite erroneous. The specific name is based on the superficial resemblance of Spanish moss to *Usnea*, a gray, draping lichen also commonly called "old man's beard." The generic name immortalizes a Swedish student, Tilland, who walked a thousand miles around the Gulf of Bothnia rather than endure seasickness by making a boat crossing. Linnaeus mistakenly presumed that Spanish moss, being arboreal, shared Tilland's distaste for water.

Two centuries ago the pioneer naturalist William Bartram, on a four-year trek through the Southeastern wilderness, gazed upon Spanish moss and pronounced it "a singular and surprising vegetable production." Visitors to the region have echoed his words ever since, and writers too numerous to count have penned the plant into their descriptions of the landscape. In *Cross Creek*, for example, Marjorie Kinnan Rawlings wrote:

> One day in June a cloud passes over the sun in the late afternoon. The clouds spread until all the sky is gray. The air is so still that even the restless Spanish moss hangs motionless...Then an impalpable breath stirs. The tallest palms in the east grove bend their heads, the moss in the hammock lifts as though a silent hand moved through a gray beard...and rain...comes in at the gate.

Rawlings' account implies her perception of the nature of Spanish moss, its variability of form and "mood," depending on the weather and the time of day. I myself recognize four imaginary "personalities" of the plant. When hanging pendulous and still, it is the embodiment of Father Time, a glimpse of an eternity I know that I can never know. In a storm, the moss is a gyrating ballerina swept up in the twin forces of music and art. On sodden days when the moss is sodden too, it becomes disheveled hair. And then there is the full moon night, when the moss appears to me to be an ardent swain extending tender arms toward a golden love.

The Indians of the South had their own metaphors for Spanish moss, and at least one engaging legend which, unfortunately, has been through so many tellings that its tribal source is obscure. I've heard the tale several ways. This version is abstracted from a ghastly verse on a postcard which a friend sent me several years ago from Mississippi:

> A comely Indian princess and her intended, a brave warrior, were slain in a savage battle on their wedding day. Together they were buried in the sturdy shelter of a live oak tree. As tribal custom dictated, the bride's flowing black hair was cut prior to the burial and draped afterwards on a limb of the tree above her grave. The raven tresses hung there undisturbed. As many years passed, they turned to gray and spread from tree to tree.

This legendary story of the origin of Spanish moss is best represented today on postcards and in the scene-setting paragraphs of plantation novels. Otherwise, some people who live with Spanish moss tend to regard it as a picturesque nuisance, primarily good for titillating tourists and clogging lawn mowers. I must admit I once held that view, living as I did beneath the arboreal litter of a live oak which regularly dropped banners of moss onto my lawn. I got blisters aplenty raking up the stuff so I could cut the grass. Then some elderly Wisconsin friends came to visit. With childlike ecstacy they gleaned the fluffy windrows and packed this dubious treasure in their car trunk to take back North. The Florida sun, I was convinced, had disrupted their reason. Not so. They wanted the moss to fill pillows.

As recently as the Great Depression years—during my Wisconsin friends' youth—Spanish moss was in demand as a quality filler for upholstery, mattresses and car seats. It dries to a springy filament which stays resilient far longer than do most other stuffings.

Human use of Spanish moss apparently began with the Indians. Jacques LeMoyne, a Frenchman who arrived at the mouth of the St. Johns River in 1564 with the Laudonniere expedition, found native women wearing moss skirts. The early White settlers in Spanish-moss country learned other uses from the Indians, and they also invented some of their own. The plant was dried and ginned (combed, like cotton) for use in braided rope, bridles, saddles and horse collars. Fishermen wove it into seining nets. Ranchers fed it ▷

to their cattle. Their wives used it for baby bedding and to protect garden plants from frost.

According to University of Miami botanist Julia F. Morton, Spanish moss-country pioneers also believed in certain medicinal uses for the plant. In her book, *Folk Remedies of the Low Country*, she reports that Spanish moss:

> ...is boiled and the decoction used for bathing swellings and rheumatism. The 'tea' (is) taken for easy delivery and to increase the flow of mother's milk. Makes afterbirth come out. It is taken twice a day to 'clean out' after giving birth. The green moss is also put in the shoes as a remedy for high blood pressure, and is tied around neck to relieve sprained neck. Crushed moss is applied to hemorrhoids.

EDITOR'S NOTE: *As with many other traditional folk remedies which reportedly used plants and other materials for treating human illnesses and diseases, some actually worked and some did not. Although this history of plant use is interesting, the use of any folk remedies can be and often is dangerous or ineffective.*

Dr. Morton also notes that analysis shows Spanish moss does contain such useful chemicals as coumarin (an anticoagulant), resins, an antibacterial principle, an estrogenic substance, carotene and Vitamins A and C. Although an important drug in Mexico, Cuba and Brazil, it has never been officially recognized in the United States. However, a commercial moss industry that was based on the plant's physical, rather than medicinal, properties was developed here.

Ginning of Spanish moss grew rapidly in the first years of the 20th Century. By the 1930s, Florida had at least 10 moss factories and Louisiana as many as 50. During the Great Depression, many low-income Floridians kept body and soul together by picking Spanish moss and selling it to a factory for a few cents a pound. One such picker was Archie Carr, now a prominent biologist at the University of Florida. A few years ago he described a typical Spanish moss enterprise in a magazine article for *Audubon*:

> What you did was fasten a foot or two of barbed wire to the end of a long pole, shove this up into a hanging clump, twist the pole to engage the moss, and then haul it down. In prime moss woods, a good picker could gather up to five hundred pounds a day...
>
> When a strand of live moss is killed and cured, the outer sheath falls away and what remains is a hard, black fiber known in the trade as hair. It took as much as six months to produce the best grade of moss hair. They used to kill the plants by piling them in mounds or packing them into pits and then soaking the moss with water. Some people preferred lye water. The moss was turned periodically to cause even decomposition of the 'bark', as the pickers called the soft outside covering. When it was good and dead they hung it out on a fence or a clothesline to dry, turned and rehung it a few times, then took it down and sent it to the factory to be ginned and baled.
>
> ...In those days moss trucks were a common sight on the roads. They were usually ramshackle and always monstrously overloaded, and when they got caught in the rain their loads soaked up water and they broke down.

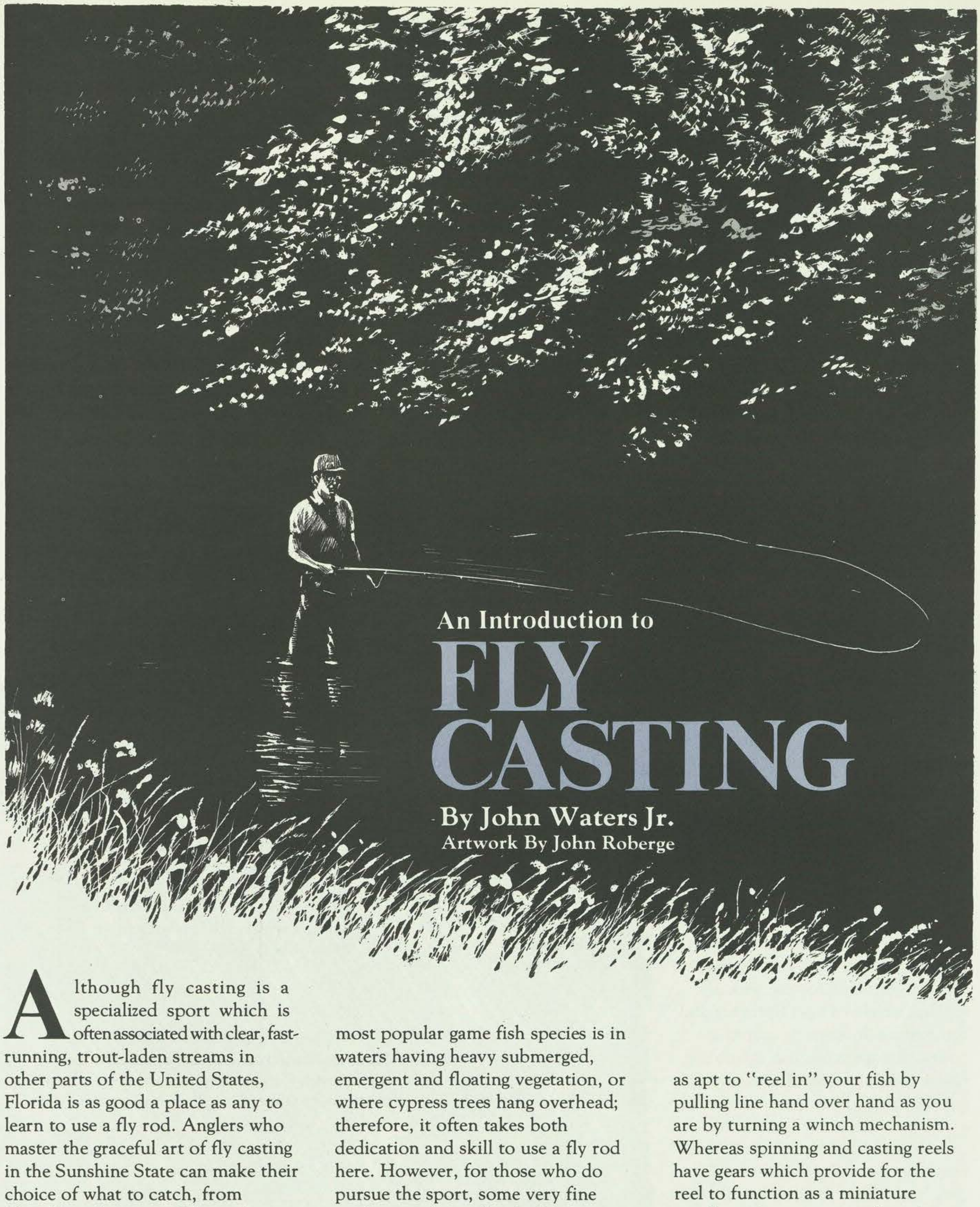
Production of moss hair peaked in 1936 at 10,000 tons, with a value—in depressed dollars—of $2.5 million. Today the industry is extinct in the United States. Florida's gins closed years ago. A survivor existed as late as 1975 in the tiny Louisiana town of Labadieville, but it too has now shut down. Foam rubber, nylon and other synthetics eroded the ginners' markets, and says Carr, "picking moss just got to be too symbolically menial for our time."

By ironic coincidence, new uses for Spanish moss were being explored even as the Spanish-moss industry declined. The plant also yields ink and a wax that can be used for polishing autos and furniture. Also, it can serve as a natural air pollution indicator. Scientists at the University of Texas and Louisiana State University have found that it absorbs from the air and concentrates in its tissues such metallic industrial poisons as cadmium, lead, manganese and mercury. Because Spanish moss appears able to tolerate relatively high levels of these pollutants while reflecting their concentrations in the surrounding environment, it may become important as a biological monitor of pollution. With the rising costs of environmental monitoring systems, reseachers are increasingly interested in such natural indicators.

The pollution monitoring discoveries are a byproduct of studies initiated a decade ago when Spanish moss inexplicably began to die all over the South. Scientists at first feared that the plant was a victim of modern technology, but the culprit ultimately turned out to be a leaf and stem blight caused by a natural fungus, *Fusarium solani*. It struck first in a 75-mile-wide swath from the Sarasota-Bradenton area northward through Gainesville into Georgia, then spread north to South Carolina and west to Louisiana. In Florida, the blight killed an estimated 90 percent of the Spanish moss while eluding all efforts to determine how it spread or how to cure it.

By 1974, the blight had run its course and Spanish moss began making a comeback as mysteriously as its earlier decline. Silver-gray spikes began to appear in their former abodes and new seedlings sprouted in the dismal brown fibers of blighted clumps. Today, Spanish moss thrives again, a dramatic and romantic character to the natural Southern landscape.

EDITOR'S NOTE: *George Leposky is an adjunct professor at Florida International University, where he teaches technical writing in the English Department. He has previously contributed features to FLORIDA WILDLIFE.*



An Introduction to

FLY CASTING

By John Waters Jr.

Artwork By John Roberge

Although fly casting is a specialized sport which is often associated with clear, fast-running, trout-laden streams in other parts of the United States, Florida is as good a place as any to learn to use a fly rod. Anglers who master the graceful art of fly casting in the Sunshine State can make their choice of what to catch, from bluegills to largemouth bass. Some devotees of the sport even catch such giant sport fish as tarpon on fly rods.

Most often, however, fly fishing in Florida's freshwater lakes and streams will be for panfish and bass. Much of the favored habitat of our most popular game fish species is in waters having heavy submerged, emergent and floating vegetation, or where cypress trees hang overhead; therefore, it often takes both dedication and skill to use a fly rod here. However, for those who do pursue the sport, some very fine catches can be made. And, it's a kind of fishing that's challenging even if the fish are small ones.

Fly fishing is a very active form of fishing, partially as a result of the equipment being relatively simple. A fly reel is not much more than a free-turning spool, and you are just as apt to "reel in" your fish by pulling line hand over hand as you are by turning a winch mechanism. Whereas spinning and casting reels have gears which provide for the reel to function as a miniature winch, with some ratio of crank turns to line spool turns, a fly reel usually has the cranking handle attached directly to the spool. One turn of the crank gives you one turn of the spool.

Other differences exist between the typical fly reel and other reel ▷

types. There is usually no guide mechanism for evenly winding the line onto the spool. And, yes, tangles can occur, although these are not near the headache that backlashes of conventional casting reels are. The reason is that fly casting line is heavier and stiffer than the line you would normally use on a bait casting reel, and thus it is easier to untangle.

It is in the line that the big difference between fly casting and other casting techniques are found. With fly casting gear, you use the line itself as the weighted object which takes your lure (called a "bug" or "fly" in this sport) out to where the big fish is waiting. With spinning and bait casting gear, however, you use the lure's weight as the principal carrier. If your spin-casting lure is lightweight, you use a light line, and for heavier lures, you can use a heavier line.

Since you are casting the line with fly casting gear, you can use a very lightweight lure. In fact, you can cast a fly line without any lure whatsoever. Some experts can even cast the line alone, without a reel or rod. If you're just learning how to use a fly rod, a good way to start is with your reel, rod and line only because you won't have any hooks to snag.

Another main difference between fly casting rigs and spinning or bait casting rigs is *balance*. You can use a whole range of lines—from very light to very heavy—on spinning and bait casting reels, but fly rods are manufactured for use with a specific weight of line. Spinning and bait casting lines are measured in pound-test units, such as six-pound-test or 20-pound-test for example, but fly casting lines are measured by a number such as 6, 7 or 8. This system once used alphabetical characters, running from AAA (a very heavy line) to G, to specify line weight.

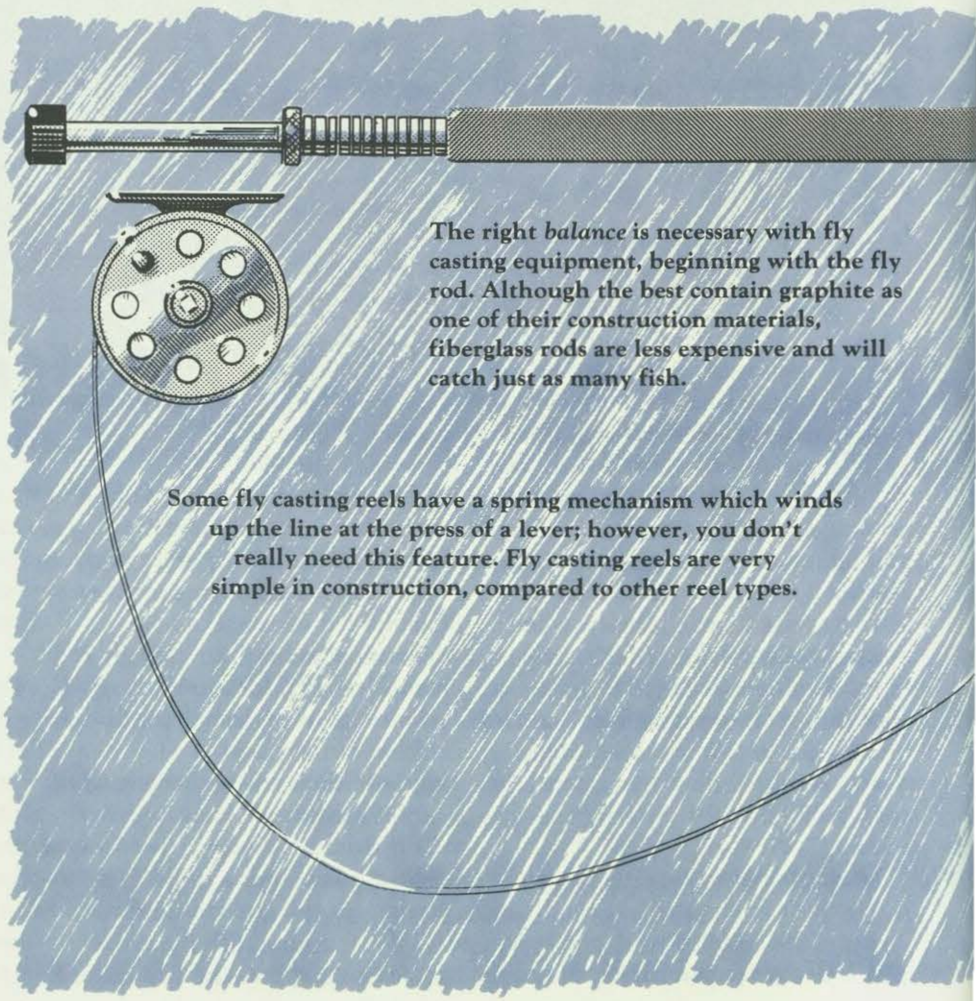
Only experience will teach you just which weight of line is best for your fishing style, but probably a line in the 6 to 9 range will best suit Florida freshwater fishing for most anglers. What is most important is that you balance the weight of the line you use with an appropriate fly rod.

Rods for fly casting are generally longer than typical freshwater spinning or bait casting rods. Probably the best length to start with is eight to eight and one-half feet long. The highest quality rods (and most expensive) are those which have graphite as one of the major construction materials; however, an inexpensive fiberglass fly rod will provide you all you need to catch your first bass on a fly rig at a substantially lower cost. As with fly reels and lines, the rod is also an intergral part of balance. Ideally, all three components are rated at the same weight class—line, reel and rod.

A number 7 line will perfectly fill the spool of a number 7 reel, and the flexibility of a number 7 rod will match the casting characteristics of the line. If you should end up with a number 7 reel and line, but only find a number 8 rod, you can get away with this small mismatch; however, a number 7 rod fitted with an 8 reel and line is not as good a match.

Another special thing about fly casting line is that the thickness can vary from end to end. Some fly lines are tapered at both ends. This type lets you use one end until it is worn, then unwind it and use the other end as the business end. Another popular type is called "weight forward." This type is easier to cast, but cannot be wound from either end. And fly lines are thick—even those that float.

A lightweight leader, called a *tippet*, is attached to the end of the heavy line. The tippet is usually about three or four feet long and can be of any number of weights—three-pound-test or six-pound-test, for example, and they are usually tapered so that the tippet gets smaller toward the hook end. Monofilament tippets are a good choice as they seem to fool the fish



The right *balance* is necessary with fly casting equipment, beginning with the fly rod. Although the best contain graphite as one of their construction materials, fiberglass rods are less expensive and will catch just as many fish.

Some fly casting reels have a spring mechanism which winds up the line at the press of a lever; however, you don't really need this feature. Fly casting reels are very simple in construction, compared to other reel types.

by providing an almost invisible connection between the highly visible, heavy main line and the fly.

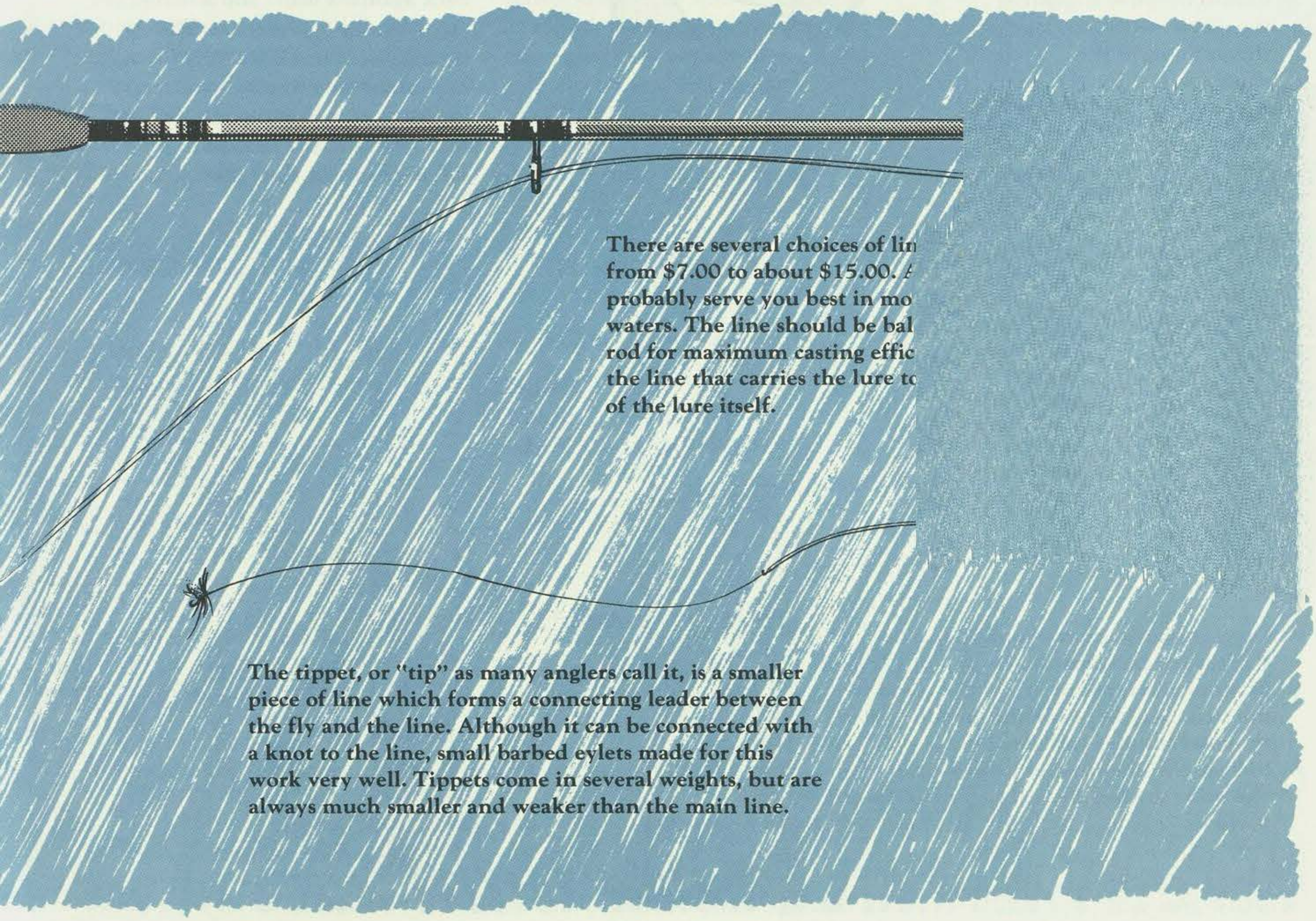
There are several good knots that can be used to tie the small-diameter tippet to the larger line, but there is an easier way to do it: simply use one of the small, pin-type metal eyelets made for this purpose. The shanks of these are barbed, and when they are correctly pushed into the end of the line, they will hold tight. You'll break the tippet first before pulling the eyelet out if it is properly inserted.

As with any other fishing gear, you can spend about as much or as little as your budget can afford to get started. Acceptable quality name-brand fly reels and fly rods are widely available in sporting goods and discount stores, and you can purchase the basics for perhaps $30, or maybe less if you catch a sale in progress. Be prepared, however, to pay $7 to $15 for a good fly line. The steep cost of fly casting line, compared to simple monofilament, however, will be spread out over many fishing trips if you simply take care of it. Also, you'll want a floating line when fishing in most Florida freshwater streams and lakes.

Once you have your basic fly casting rig, you'll need to learn how to use it. Fly casting technique is very different from casting with other gear. The major difference is that with a fly rod, you'll be making a series of casts to get the fly to the spot you expect to hold a fish. To do this, you'll be using both hands—one to pull line off the fly reel (this is called *hauling*) and the other to cast it. A fair amount of coordination will be necessary to do this, but a little practice will help you achieve it. A back yard or vacant lot is sometimes a handy place to practice fly casting.

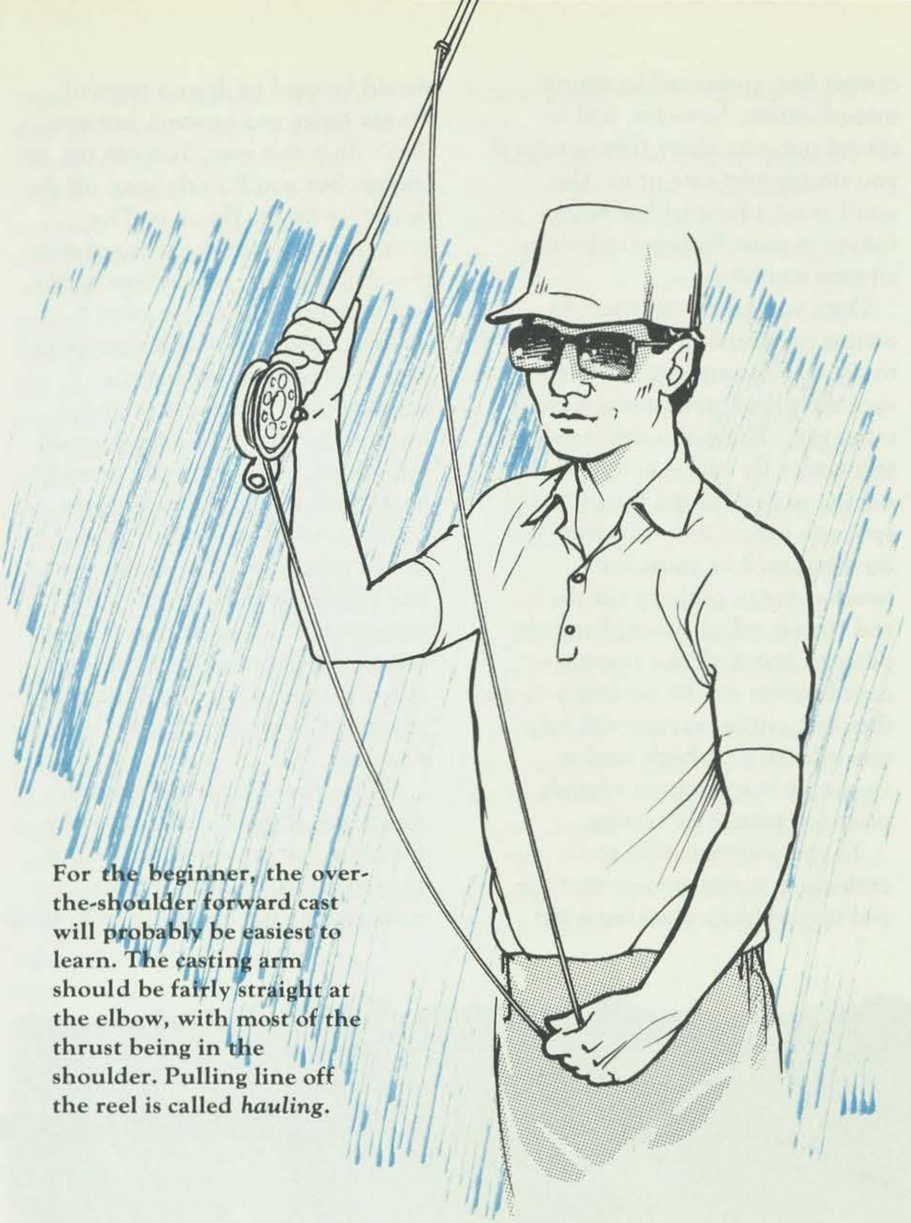
To the uninitiated fly rod enthusiast, it may appear that the rod is used like a cracking whip would be used to drive a team of horses faster and onward, but you don't do it that way. You can try, of course, but you'll likely snap off the tippet—with the fly on it. The proper motion for the forward over-the-shoulder cast is much smoother, and very importantly, in two distinct movements with a pause in between the backcast and the forward cast. The pause on the backcast is very important because this allows the line to fully extend backwards to just the right point before you cast it forward again. When practicing, try to keep the line parallel to the ground at the midpoint of the pause. Also, begin casting with about 10 feet of line out from the rod tip, and keep your arm fairly straight from the shoulder.

When first learning the simple technique of the forward over-the-shoulder cast, you may wish to let the fly fall to the water before making the next backcast. This will ▷



**There are several choices of lin
from $7.00 to about $15.00.
probably serve you best in mo
waters. The line should be bal
rod for maximum casting effic
the line that carries the lure t
of the lure itself.**

The tippet, or "tip" as many anglers call it, is a smaller piece of line which forms a connecting leader between the fly and the line. Although it can be connected with a knot to the line, small barbed eyelets made for this work very well. Tippets come in several weights, but are always much smaller and weaker than the main line.



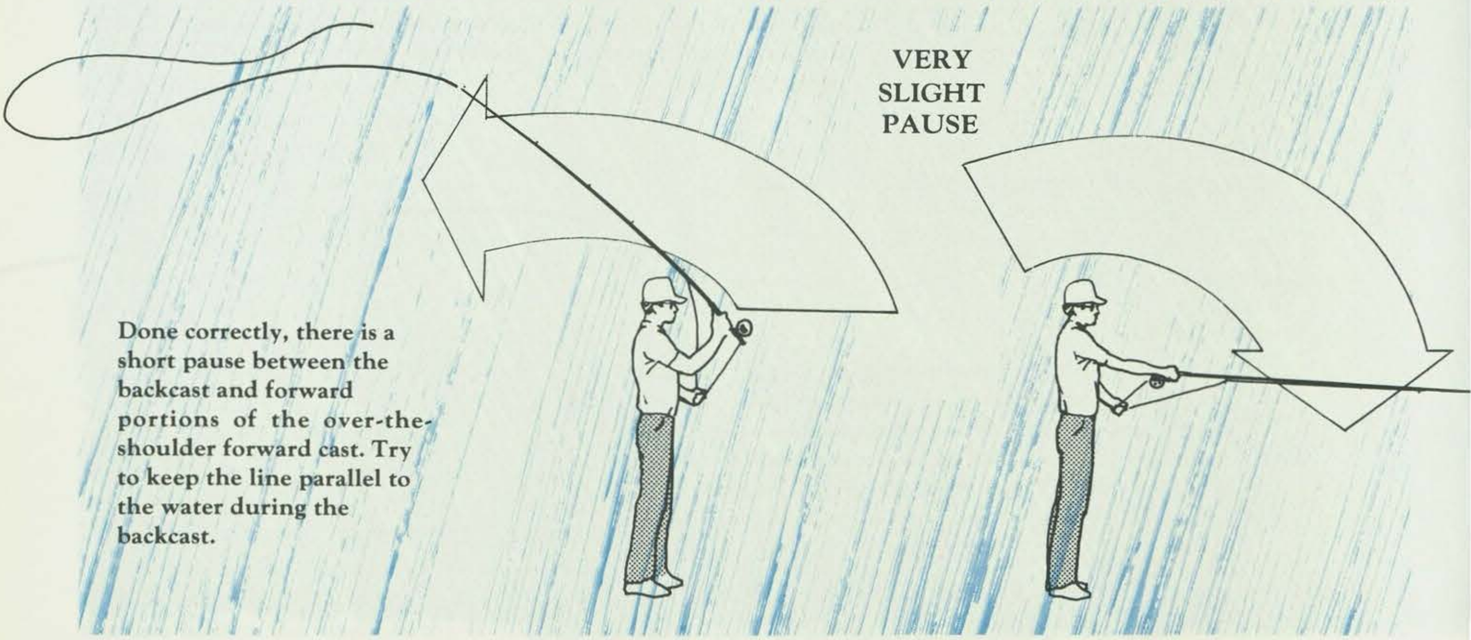
For the beginner, the over-the-shoulder forward cast will probably be easiest to learn. The casting arm should be fairly straight at the elbow, with most of the thrust being in the shoulder. Pulling line off the reel is called *hauling*.

let you better learn to judge the distance your series of casts are covering, as well as let you test your aim. As you find this to your liking, you can revise your technique so that you start the backcast just before the fly hits the water, and in this fashion, you can make several in-the-air forward and back casts before gently dropping the fly on the target spot.

As with other fishing tackle, there are a number of ways to present the hook. Whereas the most often used fly casting technique (especially by beginners) is the over-the-shoulder one just described, the motions are very similar for side casting and the "roll" cast. When you get to the point you can *roll your line*, you can probably say you know how to handle a fly rod.

Simply put, the roll differs from the basic cast in that the line always stays forward from your body. There is no backcast in the motion. Thus, an experienced roller can put his line out front, even with his back against a wall. The differences are in timing and motion. The timing difference is that the forward motion of the roll cast is made before the line has time to fly rearward, and the motion is different in that the backcast is

OVER-THE-SHOULDER FORWARD CAST



Done correctly, there is a short pause between the backcast and forward portions of the over-the-shoulder forward cast. Try to keep the line parallel to the water during the backcast.

replaced with a quick downward haul on the line. As with the basic cast, the roll can also be accomplished sideways.

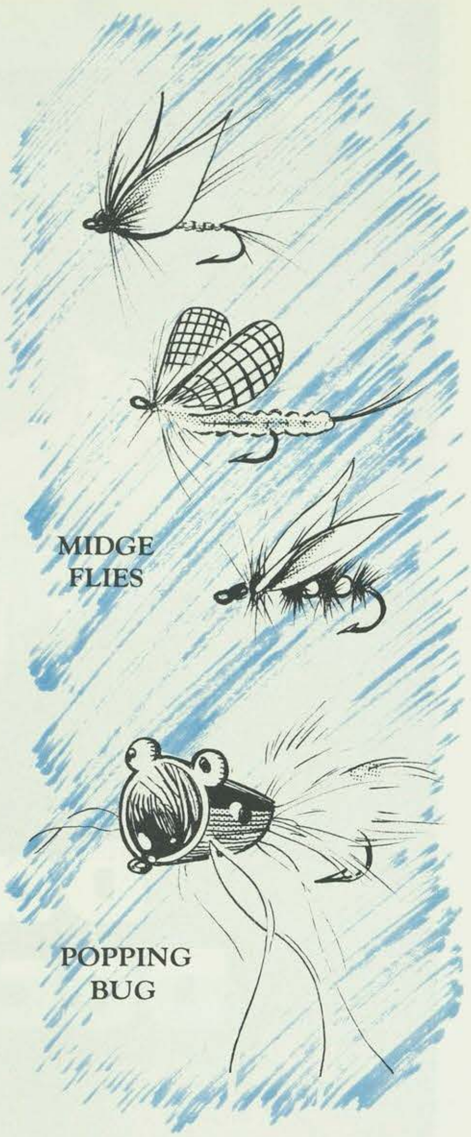
Fly casting is called that because many of the traditional lures are made to resemble flies and other insect foods that are consumed by many game fish. Even the largest fish will often take a seemingly insignificant bug when the opportunity occurs. During certain times of the year, when insects such as midges or mayflies are hatching around Florida's freshwater areas, even giant bass may take the young, tender flies—and artificials which appear to be the real thing.

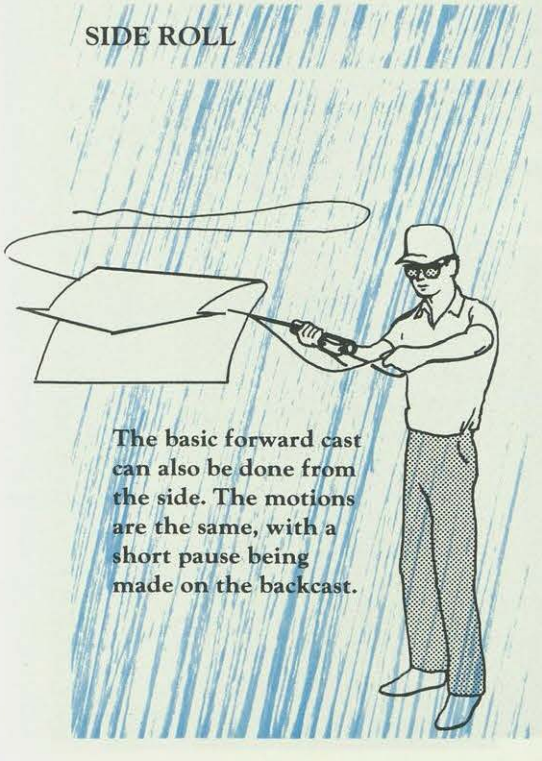
A key to success at using artificial flys, either those that you purchase or those you make yourself, is to "match the hatch." When midge flies are available naturally, you fish with a fly that appears like a midge fly. When some other creature is abundant, you change to a different fly to match it as closely as possible.

Florida's bass will frequently take "poppers," a bug type that has a concave front end which lets you give it short splashing jerks on the water surface between short rests. When bass are hitting on top, you may find a popping bug is just what it takes to catch them. Bass and bluegill will often take popping bugs at night.

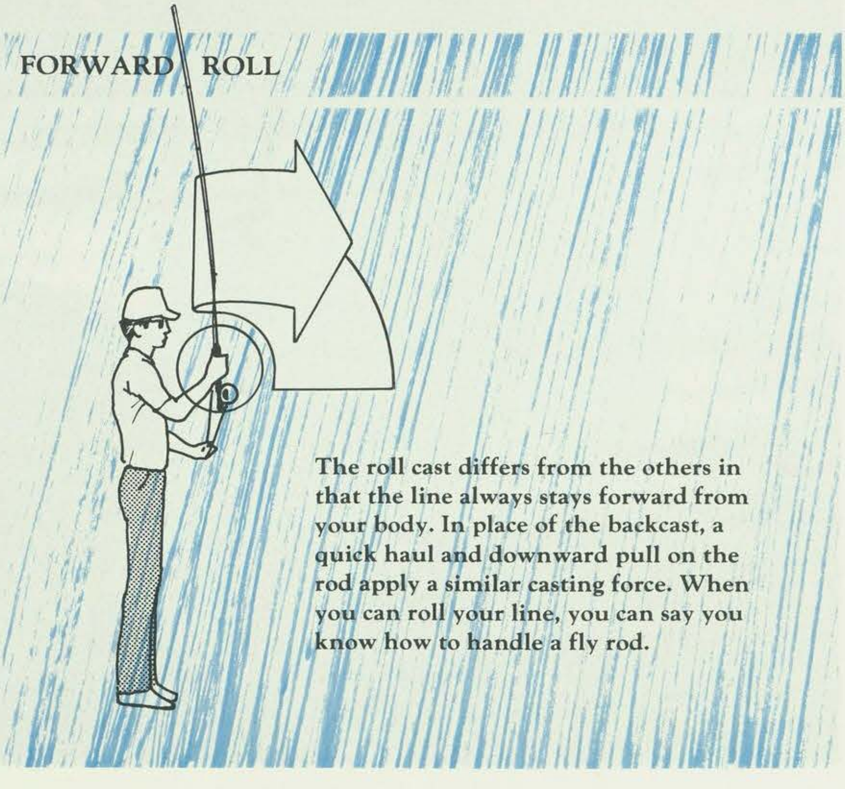
You don't need a vast assortment of artificial flies to catch Florida freshwater fish. A few basic ones will work under most conditions. Most often, because of the vegetation characteristics of our warm waters, these will be floating flies rather than sinking flies. Depending on where you will be fishing, a number of specialized manufactured flies are available, and if you take the sport seriously, you can make your own. Surprisingly, bluegills will often take small flourescent artificial flies at night. The trick is to periodically energize the molecules of phosphorus in the body of the fly, with a flashlight, so that it glows.

Early morning, late evening, overcast days and after dark are usually the best times to fly cast in Florida. And the tendency of fish to take flies changes from one season to another, with spring and fall seeming to be better for most of the state; however, as with fishing of any kind, there is no way to predict when you'll fill your stringer. But with simple gear and good technique, you'll find it a pleasure to try even if they aren't biting. Fly casting is that kind of sport.

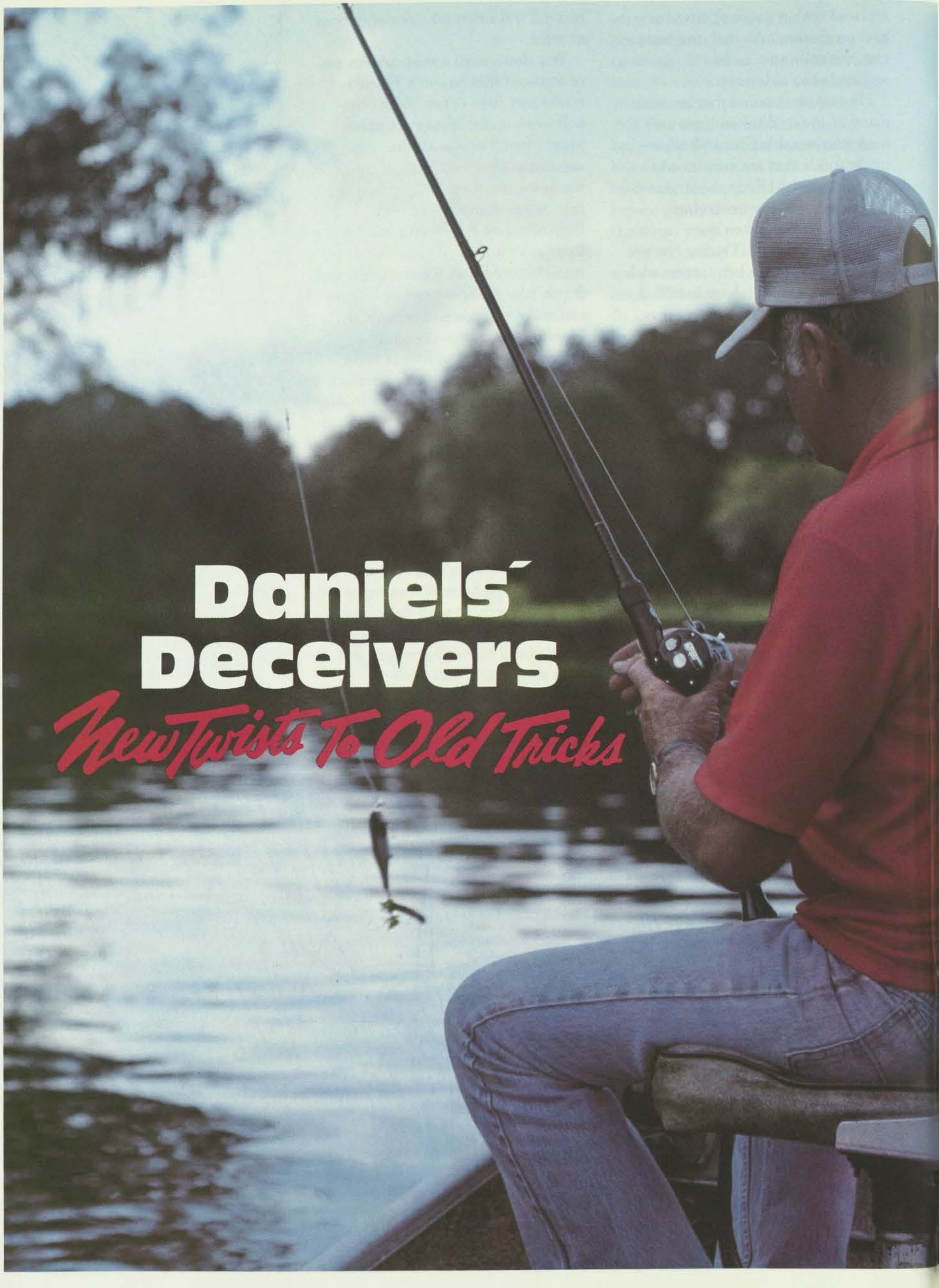




The basic forward cast can also be done from the side. The motions are the same, with a short pause being made on the backcast.



The roll cast differs from the others in that the line always stays forward from your body. In place of the backcast, a quick haul and downward pull on the rod apply a similar casting force. When you can roll your line, you can say you know how to handle a fly rod.



Daniels' Deceivers

New Twists To Old Tricks

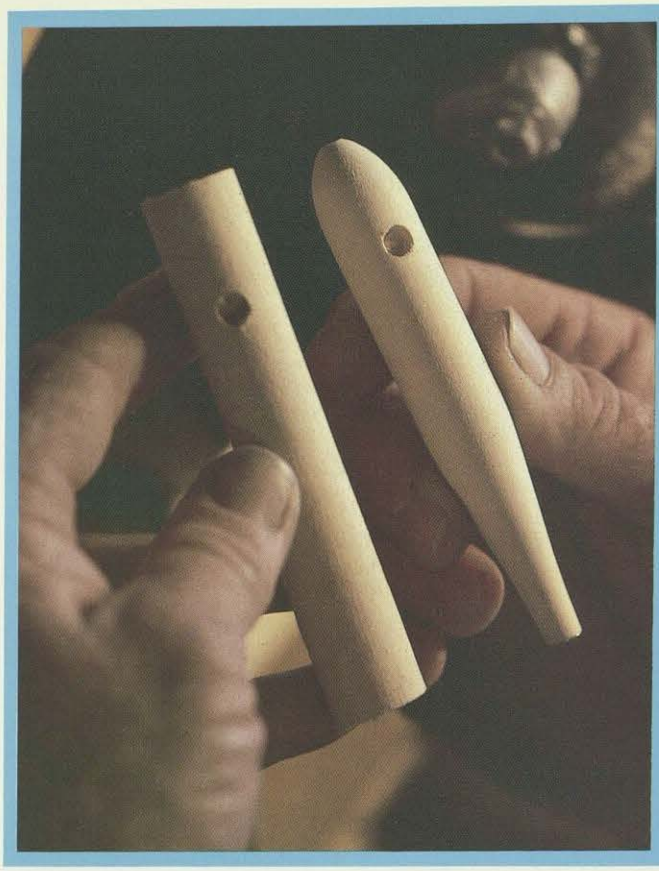
Bill Daniels couldn't find his old favorites anymore, so he made them himself.

Text and Photographs
By Jane T. Adams

The Peace River runs through the heartland of Florida and intersects DeSoto County, Bill Daniels' home county. For years, this native-born Floridian has spent endless hours on the river. It is one of his favorite fishing places.

At least once a week, Daniels can be seen in his 16-foot bass boat checking the fishing situation along the river—and pulling in some big ones in the process. He will be the first to tell you that water conditions, moon phases and bait fish activities guide him in selecting lures for the occasion.

Daniels' fishing success has brought him local fame as one who frequently outsmarts the fish and brings home the results to prove it. Experience and astute observation enable this 47-year-old gentleman to sit and talk for hours about bass, snook, redfish, tarpon, bait fish and just about any inhabitant that graces ▷



Daniels prefers to use basswood as the body material for his lures. Round dowels of this wood are turned on his wood lathe to shape them. Later, they will be painted and have the hooks and other hardware put on. Daniels uses stainless steel for these parts.

the waters of Peace River and many other Florida fishing areas. With so many years of diligent surveillance, he has formulated very definite opinions about the impact that increased human population, development and man-made changes have had on fishing.

The Peace River is one of only a few Florida rivers that remain relatively untouched by man. Although its headwaters have a high degree of pollution, by the time the waters flow to DeSoto County, the quality improves greatly. This helps account for the wide variety of game fish available to anglers in this area of the state.

About 10 years ago, Daniels began to encounter difficulty in obtaining one of his trusted lures, the wooden Creek Chub. It seemed that most tackle dealers had eliminated wooden plugs from their inventories and had begun to stock only plastic lures. This became the impetus Daniels needed to begin experimenting with making wooden artificial plugs to fit his needs. He very quickly found that lure manufacturers provided little help in his quest for knowledge.

The same method that proved to be successful to Daniels for learning about the Peace River—trial and error—proved beneficial to him for producing the successful hand-made lures he makes today. Initially, he used pine, beech, cypress and cedar woods before learning about the unique qualities of basswood, a lumber he obtains from Maine. He explains that basswood is lightweight and soft but holds hooks well. Another problem Daniels had to address was finding sources from which to purchase hooks and eyes, but with dogged determination, he located just what he needed. Today, he admits that at that time he had no conception of how involved this process was.

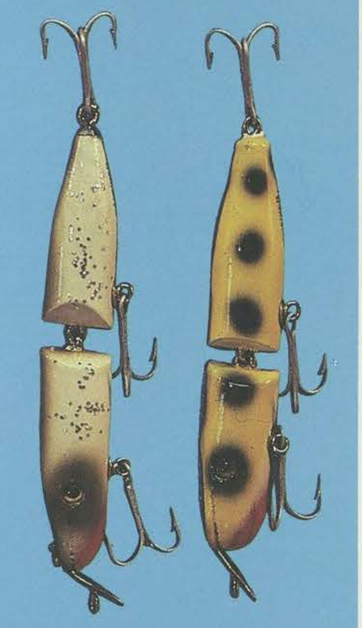
Every weeknight, Daniels spends two to three hours working on his lures. On weekends, he can be found working in his garage-workshop, or on the river testing the results of his daily efforts. Sometimes he fishes on Lake Okeechobee or Lake Kissimmee, two of his favorite other fishing sites. Daniels says he looks forward to retirement so he can concentrate full-time on this fascinating craft and the sport fishing that goes with it.

Presently, Daniels produces five styles of "*Daniels' Deceivers*," topwater lures he makes for catching bass, snook and redfish; three sizes of "*Snook Deceivers*," underwater snook lures; and two sizes of broken-back lures. His "*Ugly Chugger*," a large topwater lure, is noted for bringing in bass, snook, redfish and trout.

After obtaining basswood dowels as raw materials for making his lures, Daniels cuts them into desired lengths; then using a drill press, he drills two recessed eye sockets into each piece. Next, he turns each dowel on his lathe to shape the wood to precise specifications. Self-designed steel cutting tools are carefully manipulated to make each curve of the lure body pass the inspection of Daniels' critical eye.

After sanding each lure, two primer coats are used to seal the

"The Bee"



Broken-Back
Daniels' Deceivers

wood and make it waterproof. Then an overnight drying session takes place after which Daniels applies two coats of color with an air brush. The belly is painted first. From there he proceeds to blend the various colors upward toward the lure's top. The back color is applied last. Finally, four coats of clear paint are applied to the whole body during a two-day process.

Daniels points with pride to the glass eyes in each of his lures. These, he believes, make the lures more realistic in their appearance. He also shows observers the stainless steel lip on some lures which is designed to make them wiggle and work underwater. Presently, his emphasis is on developing his own dye and stamp. Other qualities not to be missed in Daniels' lures are the fine stainless steel and nickle-plated propellers and screw eyes. And each of his lures—both saltwater and freshwater varieties—have heavy-duty, corrosion-resistant hooks.

When asked about the name "*Daniels' Deceivers*," for which he is becoming well-known in south Florida, Daniels explains, "That's what fishing is all about—producing an artificial lure that will *deceive* fish into reacting as if the bait is alive."

Never satisfied with the status quo, Daniels is constantly experimenting with his plugs. Colors and their apparent attraction to fish are analyzed. He also keeps records of fish that have been caught with his lures. Daniels' many friends enjoy aiding him in trying out his plugs, and some of them even boast of fishing with "such an accomplished sportsman as Bill Daniels."

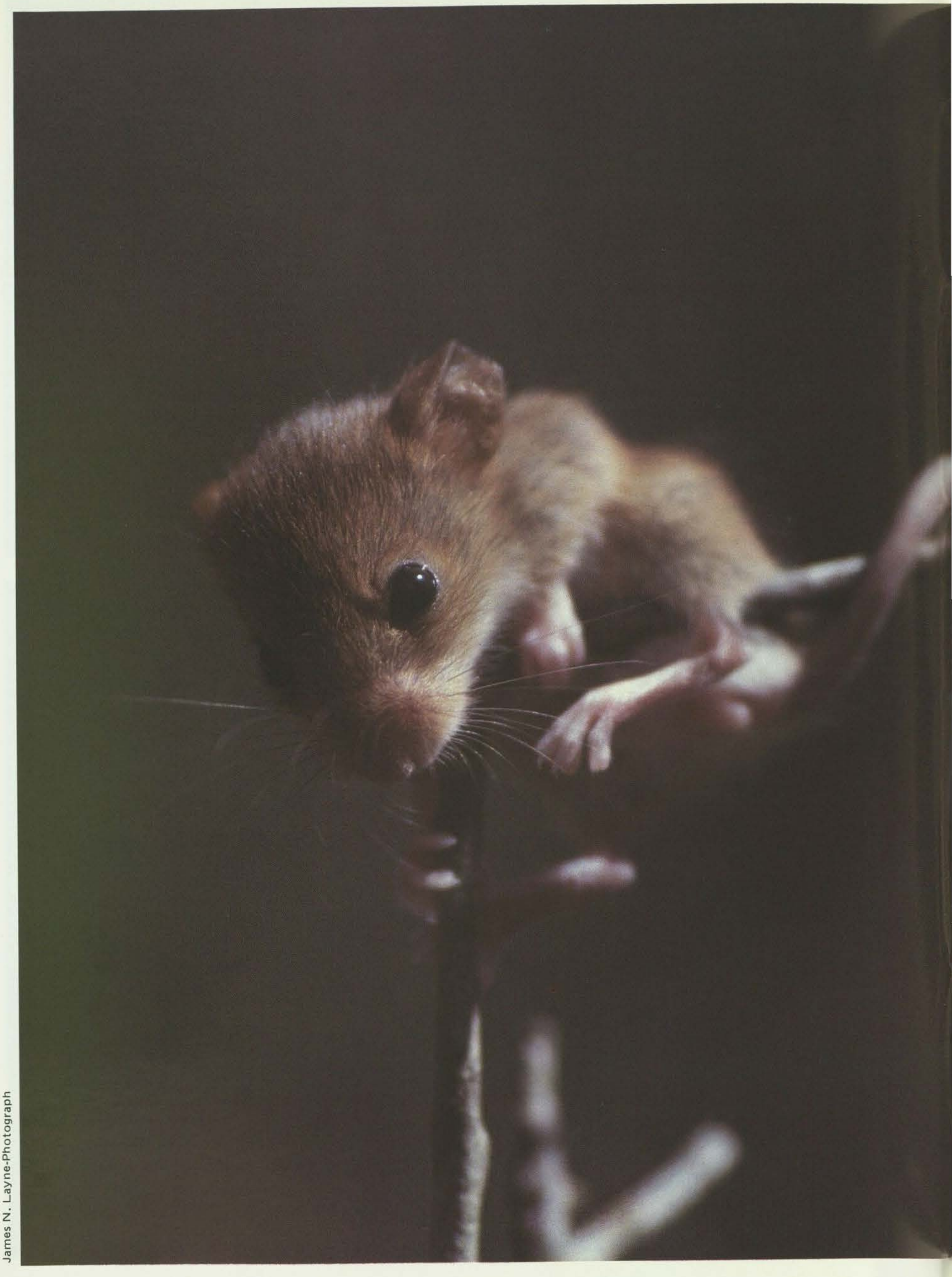
Trophies and photographs give credence to the value of his work, and constant reports from avid fishermen attest to the success of his products. News has come from as far away as Canada that pike, walleye and muskellunge have been attracted to *Daniels' Deceivers.*

By handcrafting his lures, Daniels points out that no two are identical. Each has its own action and characteristics. He tries to pretest every plug to ascertain its performance, with his major goal being production of good, dependable lures that stand up under heavy fishing pressure. When examining Daniels' work, it is obvious he has much artistic talent. Not only does he produce lures which have exciting colors and shapes, but he also refurbishes old lures.

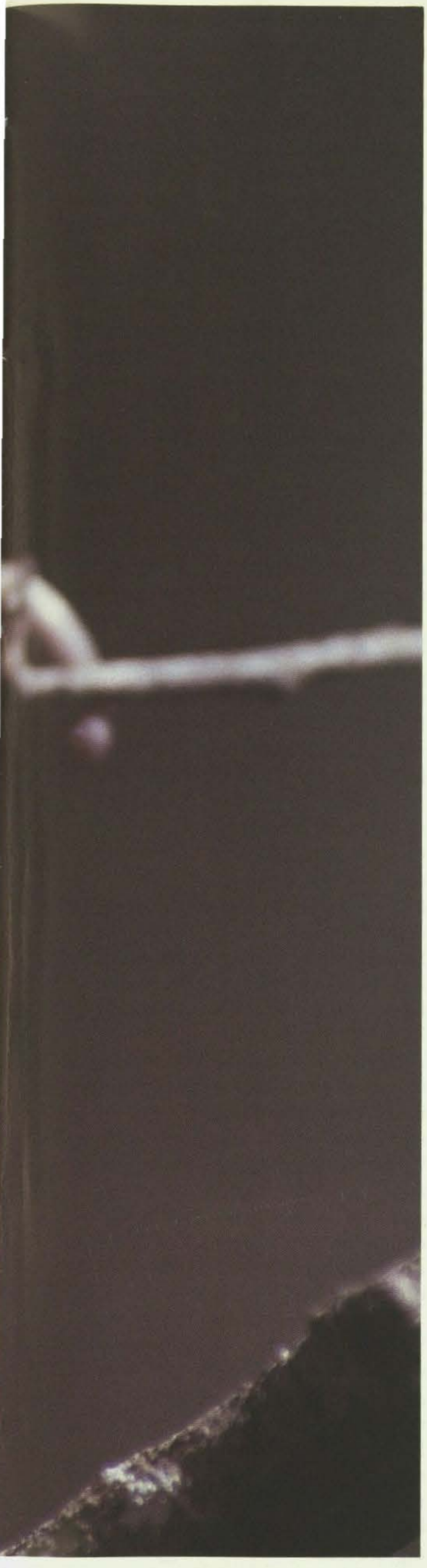
"*The Bee*," Daniels' most recent creation, is a small lure designed to catch bass and big panfish. It requires more intricate production manipulation than larger lures, he states.

Daniels has also been successful in transferring his ardent love for fishing to his son, Bill Jr., and he readily admits that, "Bill can out fish me." With these two devoted fishermen scouting the waters of the Peace River, Daniels' favorite game of challenging the fish is certain to continue.

Daniels paints the bodies of his lures using an air brush. Colors are important, and he tries to produce "an artificial lure that will *deceive* fish into reacting as if the bait is alive." After color is painted on, four clear coats are used to seal the surface.



James N. Layne-Photograph



The Golden Mouse

This nocturnal tree dweller is in a genus by itself.

By Petra Bohall-Wood and James N. Layne

The seldom-seen golden mouse is one of Florida's most interesting and attractive native mammals. As its common name implies, this mouse is a rich golden color above, with creamy-white underparts. It has large, dark eyes, reflecting its nocturnal habits, and prominent ears. Its total length varies from six to seven inches, about half of which is tail. The scientific name of the golden mouse is *Ochrotomys nuttalli*. The genus name, *Ochrotomys*, comes from the Greek word, *ochra*, meaning yellow-ochre or golden, and *mys*, meaning mouse. The specific name, *nuttalli*, commemorates Thomas Nuttall (1786-1859) a famous ornithologist, botanist and all-around naturalist. Golden mice inhabiting peninsular Florida have been described as a separate subspecies, *Ochrotomys nuttalli floridanus*.

At one time, the golden mouse was placed in the same genus (*Peromyscus*) as white-footed or deer mice, but with further study, it was found to differ in many ways from deer mice and thus was reassigned to a genus of its own. One difference between the golden mouse and mice in the genus *Peromyscus* is that the pelage (coat) of juvenile golden mice is the same color as that of adults, although less bright, while the young of *Peromyscus* species have a gray juvenile coat color. The skull and teeth of golden mice also differ in several important respects from the deer mouse group, and there are striking differences in the anatomy of the male reproductive organs of the two genera.

The geographic range of the golden mouse extends from eastern Texas and Oklahoma to the Atlantic Coast and from southern Illinois, Indiana and Virginia southward to south-central Florida. It is found most often in mixed stands of pines and hardwoods with dense underbrush or masses of vines. In Florida, golden mice occur in a variety of habitats, including hammocks, flatwoods, scrub, and swamps.

The golden mouse is one of the small mammals we have been studying for many years at the Archbold Biological Station in Highlands County. This locality is the southernmost point of the known range of the species in ▷

Florida. One of the techniques we use in our work is the so-called "capture-mark-recapture" method. Small mammals are captured alive on permanent grids in different habitat types using the Sherman live-trap, which was invented by H. B. Sherman, a former professor at the University of Florida. The traps are baited with a mixture of peanut butter, rolled oats and raisins. The first time a mouse is captured, it is harmlessly marked with a small numbered tag attached to an ear, and each time it is trapped, data on weight, pelage condition, reproductive status and ectoparasites are recorded. Then the animal is released at the point of capture. Through recaptures of marked individuals, we are able to obtain information on population size, movements, breeding season, longevity, growth and other aspects of a species' life history and ecology.

Golden mice spend much time above ground and they exhibit several adaptations for semi-arboreal life. The relatively long, prehensile tail helps the animal maintain its balance when moving along slender branches, and it can be wrapped around branches and twigs to provide support in climbing and feeding above ground. A golden mouse was once observed suspended by its tail from a small branch, like a prehensile-tailed monkey, and individual mice have been seen hanging almost at right angles to a branch, with only the hind feet and tail as support. Golden mice also have relatively strong abdominal muscles compared to more terrestrial mice, and this feature probably also reflects their climbing habits. Certain characteristics of the growth, development and behavior of young golden mice also seem to be related to a semi-arboreal life. For example, the young grow and develop relatively rapidly, which reduces the length of time they must spend in an exposed above-ground nest. This also ensures that important structures such as the tail and hind feet are well developed and fully functional at the time the young begin to make excursions from the nest. The young also exhibit a tendency to cling tenaciously to objects at a relatively early age, to respond to disturbance by becoming immobile and, when sufficiently disturbed, to seek escape by climbing.

Adult golden mice also exhibit a tendency to "freeze" when alarmed. When released from a trap, they will often climb a nearby shrub and then sit motionless. Although this behavior might seem to make them vulnerable to predators, it may actually help them escape. While certainly at home above ground, golden mice are not equipped for rapid arboreal locomotion as are squirrels. Thus, making themselves harder to detect by freezing when disturbed may be a better strategy to avoid a predator than trying to escape by making a run for it through the branches. When moving on the ground, golden mice often alternate slow, deliberate walking with freezing. When motionless, they blend into the background of dead leaves and other litter on the forest floor and thus are difficult to detect. Furthermore, since golden mice are largely nocturnal and most of their potential predators are presumably colorblind, they are probably no more conspicuous than less brightly colored mice.

Golden mice build two types of above-ground structures: nests and feeding platforms. Nests may be located from near the ground to a height of approximately 10 meters, although most nests are between 1.5 and 4.5 meters above ground. In Florida, aerial nests are usually suspended in clumps of Spanish moss or tangles of vines. However, they have also been found between palmetto fronds and in low bushes. A good nest site may be used year after year.

Nests typically have two layers. The inner lining usually consists of feathers, fur, finely shredded bark or leaves, or other soft materials. Using both forefeet and teeth, golden mice can shred even coarse materials into an extremely soft fluff. The outer layer consists of coarser pieces of leaves, grasses or bark, and is firmly attached to the inner layers. Occasionally, a bird nest is used as a foundation for a nest and covered or capped over to shed the rain. The nest is expanded from inside, the new material bulging out the sides and usually the entrance hole is plugged. Feeding platforms are similar to nests but have an entrance and sometimes an exit opening. In some cases, feeding platforms may be converted into nests and vice versa. Feeding platforms also appear to be more common in some parts of the range than in others.

In some areas, golden mice live in loosely-knit communities consisting of three or four occupied nests. Often more than one pair of mice occupy a single nest, with up to eight individuals having been found together. However, after the young are born, the male parents usually leave the nest. The social nature of golden mice is also apparent in their use of the feeding platforms. Individuals from different families with different ranges may share a feeding platform.

The foods of golden mice include seeds, fruits, insects and other invertebrate animals. Some of the seeds and fruits which are eaten include sumac, wild cherry, dogwood, greenbriar, poison ivy, blackberry and acorns. Researchers in Kentucky identified 23 different kinds of seeds eaten by golden mice. In some areas of the country, invertebrate prey items may make up about half of the diet of golden mice. Food items often are transported to feeding platforms where they are consumed. Golden mice have thin membranous internal cheek pouches that are used to transport seeds. A platform may accumulate as many as 10,000 opened seeds.

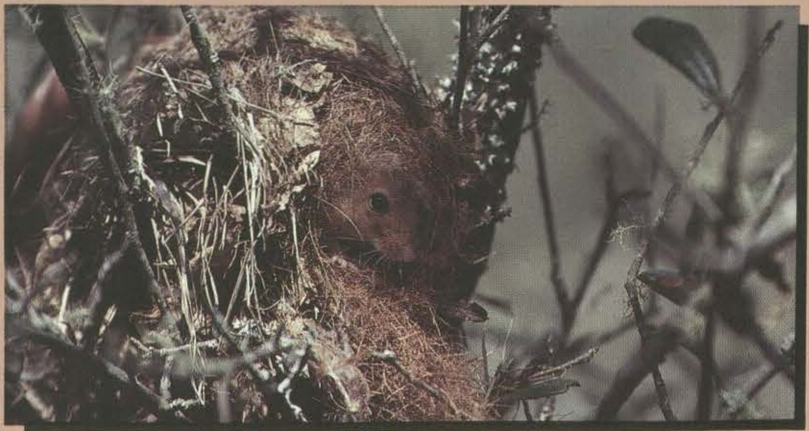
Golden mice are rather sedentary. Studies in part of the species' range showed that individuals lived in areas ranging from about ½ to 1 ½ acres. In a study in the Gulf Hammock area of Levy County some years ago, one golden mouse was recaptured after a year-and-a-half within 100 feet of its original capture site.

Like many small rodents, golden mice have a high reproductive potential. One female in captivity produced 17 litters in 18 months. Although breeding may occur throughout the year, most young in Florida are produced in early summer and autumn. A female usually has two or three young in a litter. She may also come into breeding condition shortly after giving birth and thus become pregnant while nursing an earlier litter. Although golden mice have the potential to produce as many as seven or eight litters in a year, it is likely that only a few females in Florida produce more than two or three litters.

Though the young are born with no fur and with their eyes and ears closed, they are relatively strong and well coordinated compared to the young of similar-sized rodents. By the end of the first week, the pelage has begun to develop and has a sleek velvety sheen; it is well-developed in just two weeks. The young begin to respond to sounds between eight and 10 days of age and open their eyes after 11 to 15 days. They are weaned at about three weeks of age.

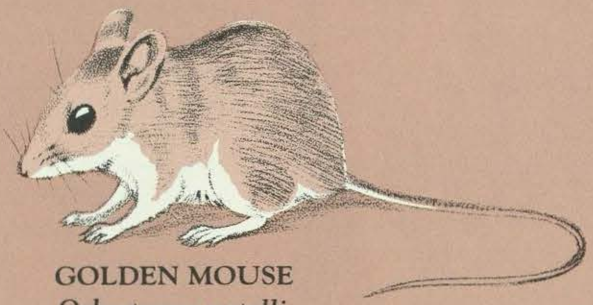
Similar to most small mammals, golden mice usually don't live very long in the wild. Predators—including owls, hawks, foxes, bobcats and snakes—are probably the major cause of mortality. In some populations, the average lifespan may be six months or less. Nevertheless, one wily (or lucky) golden mouse managed to survive for at least 2 ½ years in the wild in Levy County. Golden mice tend to live much longer in captivity than in the wild, indicating the hazards facing animals living under natural conditions. One female golden mouse lived to a ripe old age of eight years, five months in captivity.

It is unfortunate that because of its secretive habits, the golden mouse is not known to most Floridians, even those who spend much time in the woods. To see one of these beautiful creatures and to know something of its way of life is certain to dispel the idea that all mice are drab and nasty little animals.

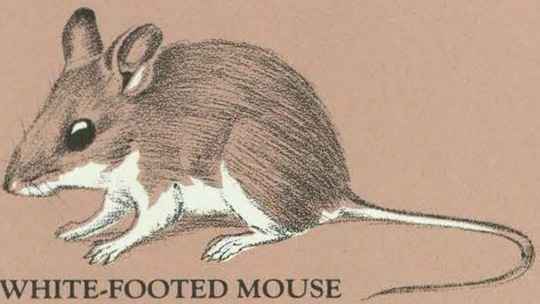


James N. Layne-Photograph

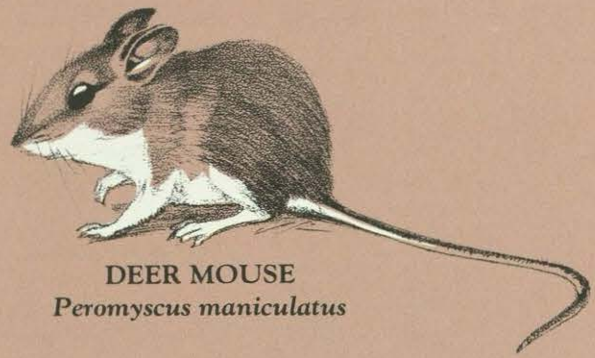
The golden mouse spends much of its time off the ground in small trees and shrubs. One of its habits is to build arboreal feeding platforms. As many as 10,000 opened seeds have been counted at one platform. Nests are also constructed in trees or shrubs.



GOLDEN MOUSE
Ochrotomys nutalli



WHITE-FOOTED MOUSE
Peromyscus leucopus



DEER MOUSE
Peromyscus maniculatus

Officially, there are two endangered species of woodpeckers native to Florida: the ivory-billed woodpecker (*Campephilus principalis*) and the red-cockaded woodpecker (*Picoides borealis*). Each is on both the federal and state lists of endangered and threatened species; however, probably only the red-cockaded remains. No confirmed reports of ivory-bills have come from Florida, or anywhere else for that matter, in more than a decade, and unfortunately that species may already be extinct. The last few apparently valid, documented sightings in Florida were several made between 1967 and 1969 in Highlands County. Previously documented Florida sightings occurred in 1952 in northern Wakulla County, (several) in the panhandle in 1950 along the Chipola and Apalachicola rivers, and (one) in 1949 in the Silver River Swamp near Ocala. A few recent unsubstantiated sightings have been made that appeared promising yet not conclusive, including one near Eglin Air Force Base in 1966 and one in Martin County in 1985.

Elsewhere, the last confirmed sightings were in 1971 in Louisiana and in 1969 in eastern Texas. But other possibly valid, although unconfirmed, sightings have been made in South Carolina's Santee Swamp in 1971, in Louisiana's Atchafalaya Swamp in 1971 and 1974, and in Louisiana's Tensas National Wildlife Refuge in 1981 and 1982.

The ivory-bill, at about 20 inches in length, is roughly the size of a common crow and is the largest North American woodpecker north of Mexico. To the untrained eye, the common pileated woodpecker (*Dryocopus pileatus*) is very similar in appearance. Both species have prominent crests on the tops of their heads and striking black and white body coloration. Consequently, virtually all recent sighting reports of ivory-bills, when investigated, have turned out to be pileateds.

The two species are, however, fairly easy to distinguish if one knows what to look for. The ivory-bill has much more white coloration than the pileated, and when perched, the lower half of its back is white; whereas the back of the pileated, when perched, is entirely black. Also, in the pileated woodpecker, the crests of both males and females are entirely red, while in the ivory-bill the female's crest is black and the male's is red with a black front. The two species are therefore easily distinguished when not flying. The

FLORIDA'S ENDANGERED WOODPECKERS

By Don A. Wood and Neal Eichholz

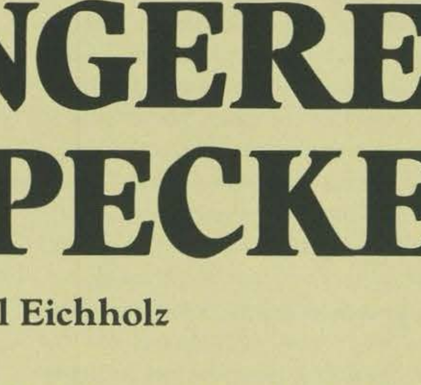
two birds can also be distinguished in flight. The pileated has an undulating flight pattern with irregular wing flaps, as is typical of nearly all other woodpeckers, while the ivory-bill's flight is reported to be atypically direct and steady.

The calls each species emits are also very different. The ivory-bill's call is a "single nasal note" resembling the *toot* of a toy horn, while the pileated's is more piercing and shrill, and always emitted in a series of notes rather than singularly. And, finally, the ivory-bill's bill, as indicated by its name, is an ivory white while the pileated's is grayish in color. That particular difference, however, can be discerned only upon close observation.

Another bird also sometimes confused with the ivory-bill and the the red-cockaded woodpecker is the red-headed woodpecker (*Melanerpes erythrocephalus*). The red-headed has black and white body coloration similar to the ivory-bill, but it is considerably smaller, its head lacks a crest, and, unlike either the ivory-bill or red-cockaded, its entire head is a brilliant red.

The original range of the ivory-bill was basically the southeastern United States, and within that range it inhabited vast swampy forests. Outside Florida, the species occurred principally in the large bottomland river swamps of the Southeastern Coastal Plain and Mississippi River Delta. In the Florida peninsula, it occurred in cypress swamps and in northern Florida it occurred mostly along the Apalachicola River and in river swamps from the St. Marks River to the Suwannee River. The bird was very dependent upon virgin lowland forests, and its decline and probable extinction was undoubtedly due to the intensive logging of such timber in the late 1800s and early 1900s.

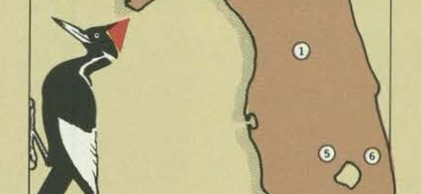
IVORY-BILLED WOODPECKER REPORTS IN FLORIDA



1. **Silver River Swamp, 1949**
2. **Chipola & Apalachicola Rivers, 1950**
3. **Wakulla County, 1952**
4. **Eglin Air Force Base, 1966***
5. **Highlands County, 1967 and 1969**
6. **Martin County, 1985***

***Unsubstantiated Sightings**

MOST SUITABLE FLORIDA HABITATS AT PRESENT



A - Choctawhatchee River
B - Apalachicola River
C - Ochlockonee River
D - Wacissa River
E - Suwannee River

Individual ivory-bill pairs require very large foraging ranges, up to about six square miles. The need for such large areas is associated with the species' highly specialized feeding habits. It forages only on recently dead trees, stripping off large swaths of bark to get at the insects and other arthropods underneath. Very large foraging areas are required to ensure an adequate supply of such recently dead trees.

If ivory-bills still occur in Florida, the areas of most likely suitable habitat are the bottomland hardwood forests along portions of the Apalachicola and Suwannee rivers, where several large tracts of mature timber still remain. Less likely areas, but possibly still at least marginally suitable, are the swamps along the Wacissa, Choctawhatchee and Ochlockonee rivers. Hopefully, a population of ivory-bills will soon be discovered in one or more of those areas, and steps can be taken to ensure the bird's continued survival. Unfortunately, such a discovery is unlikely.

The red-cockaded woodpecker has not suffered such a tragic fate nor is its future so bleak, at least not ▷

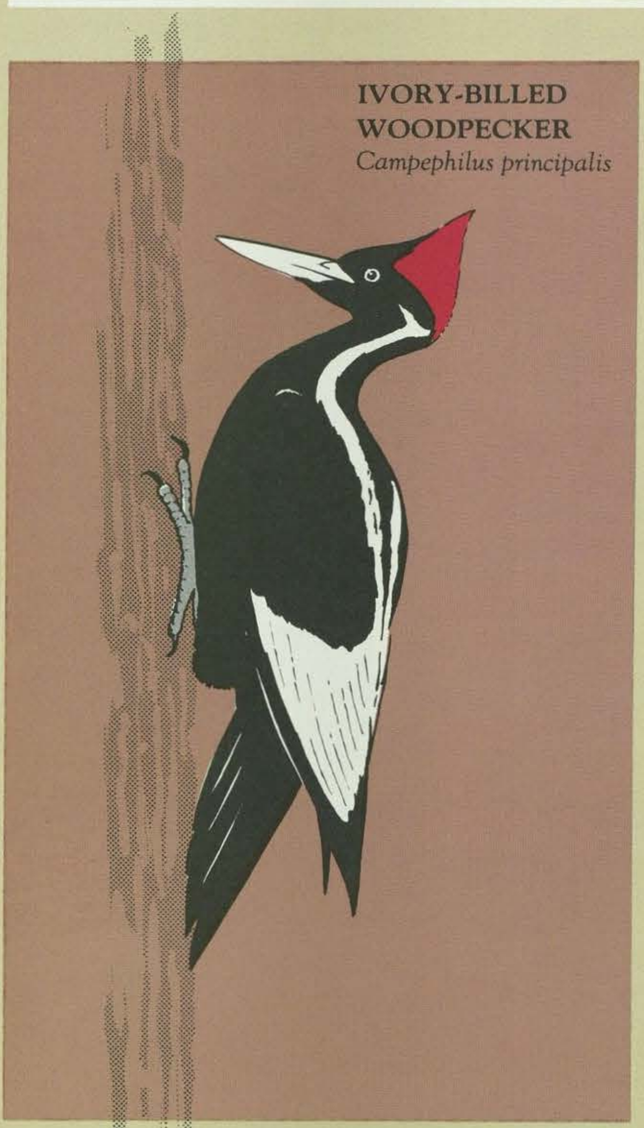
yet. The red-cockaded's range in Florida includes most of the state, although its distribution within that range is very fragmented and is becoming more and more fragmented with time. Recent estimates put the statewide population level at about 2,500 to 3,000 birds, with the majority on public lands. The Apalachicola National Forest and Eglin Air Force Base contain the two most substantial populations in the state, consisting of about 1,400 and 600 birds, respectively. The Apalachicola population is the most numerous in the entire Southeast.

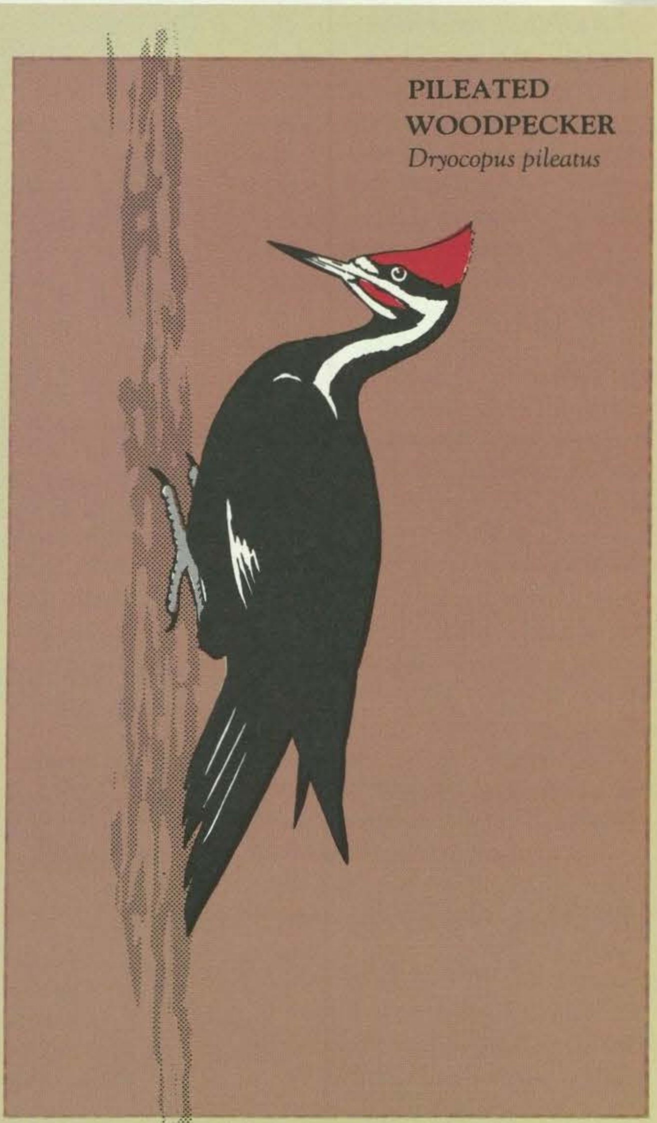
The red-cockaded is small in comparison to the ivory-bill, about seven inches in length or slightly smaller than the red-headed woodpecker. It is black and white in coloration and has conspicuous white cheek patches. Its "ladder" (black and white horizontal stripes) back is also distinguishing. The bird gets its name from a tiny red spot (the "cockade") above and behind each eye of the male. The spot is so tiny, however, that it normally cannot be seen in the field.

The most distinguishing and unique feature of the red-cockaded woodpecker is not its physical appearance, but the appearance of its cavity trees. It excavates its cavities almost exclusively in living pine trees and is the only American woodpecker to do so. Around each cavity, it pecks numerous small "resin wells" from which sap continually exudes. The result is a candle-like, waxy appearance, and often the flowing sap is very whitish in color and individual cavity trees can be spotted from long distances away. The principal function of the flowing sap is to repel predators.

The red-cockaded woodpecker is the only truly social woodpecker in North America, occurring in groups called *clans* which consist of a mated pair and up to three or four "helpers," which are always males. During the breeding season, the species' social structure is strikingly similar to that of the timber wolf. Only one breeding pair exists per clan (in the case of wolves, one breeding pair per pack, called the *Alpha male* and *Alpha female*), and the clan "helpers" help feed and otherwise care for the young, as well

FLORIDA'S NATIVE WOODPECKERS, PAST AND PRESENT


IVORY-BILLED WOODPECKER
Campephilus principalis

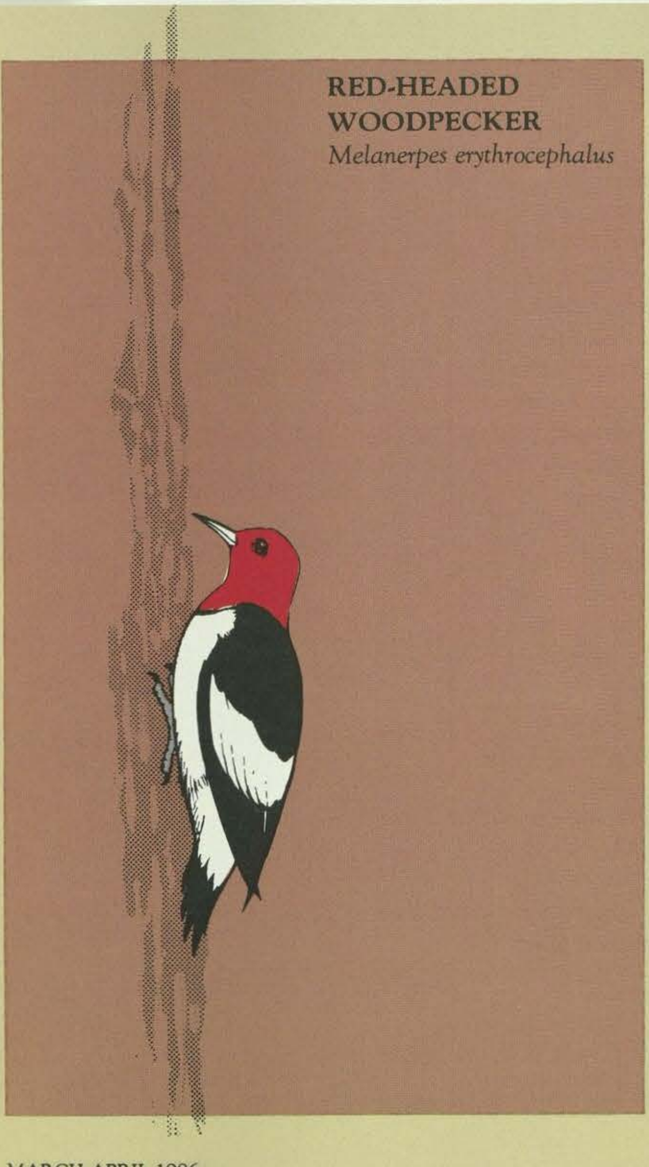

PILEATED WOODPECKER
Dryocopus pileatus

as engage in active territorial defense against intruders. Non-breeding pack members in wolf society have virtually the same responsibilities as red-cockaded helpers.

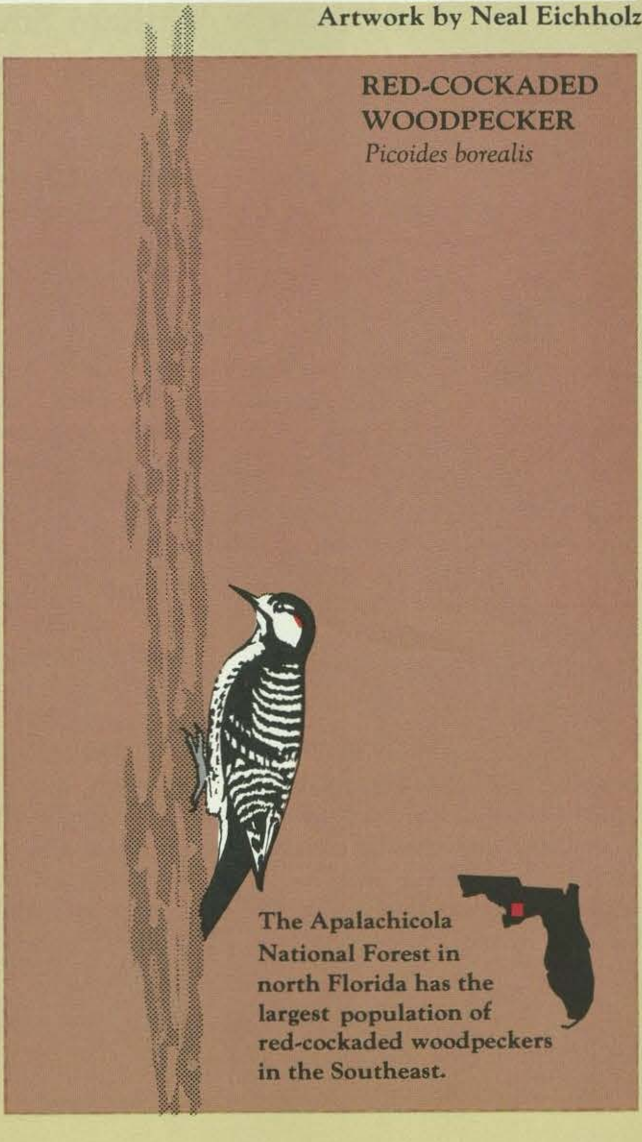
Other than both being woodpeckers, the red-cockaded and ivory-bill are similar in several notable respects. Both originally ranged over the southeastern United States; both have specialized, restricted habits; and logging was the ultimate cause of the decline of both. However, there are distinct and important differences within those similarities. First, although their original ranges coincided, they occurred in different habitats—the ivory-bill required virgin bottomland hardwood forests and the red-cockaded required mature upland pine forests. Second, although both are specialists, the ivory-bill is specialized in its feeding habits and the red-cockaded is specialized in its nesting and roosting habits. Red-cockadeds excavate their nest and roost cavities in old (usually at least 60 years old), living pine trees which are infected with heart rot. That requirement is why they are found only in mature pinelands. In the cases of both species, their respective specializations have made them very sensitive and vulnerable to alteration of their habitat. Finally, while logging of bottomland forests caused the decline and possible extinction of the ivory-bill, logging of upland mature pinelands continues to adversely impact the red-cockaded and may eventually subject it to the same fate. One of the principal reasons that the red-cockaded is not already as endangered as the ivory-bill is that its mature pineland habitat was originally much more extensive in acreage than was the ivory-bill's bottomland hardwood habitat.

There is still time to save the red-cockaded, but such modern intensive forestry practices as clearcutting vast contiguous areas and short timber harvest rotations are not compatible with long-term red-cockaded survival. If extraordinary steps are not taken and prevailing philosophies are not adjusted, it may not be long before extinction is also imminent for this species.

Artwork by Neal Eichholz



RED-HEADED WOODPECKER
Melanerpes erythrocephalus



RED-COCKADED WOODPECKER
Picoides borealis

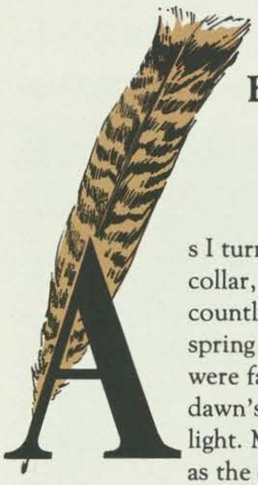
The Apalachicola National Forest in north Florida has the largest population of red-cockaded woodpeckers in the Southeast.

The Wild Turkey

AN AMERICAN LEGACY

Text and Photographs

By John & William Smith



As I turned up my collar, I watched countless stars in a spring sky as they were fading with dawn's first gray light. Minutes passed as the dark inanimate shapes of the woods grew in form and color.

Lee Dover and I stood in the early morning darkness of the oak hammock, pestered by a handful of droning mosquitoes. Their incessant and meticulous search for exposed skin challenged the concentration we needed to hear our quarry's call.

Presently, the sounds of other inhabitants of the oak hammock added to the distraction of the mosquitoes. Daylight was imminent and a light breeze had begun to rustle the leaves overhead when Lee touched my arm.

"Listen!" he whispered.

Upon his muted command, and with ears straining, I detected the faint, yet unmistakable call of a wild turkey gobbler. The sound came from the direction of a swamp just to the north. It was time for action!

Moving quickly and silently, we left the oak hammock, crossed a pine flat and, after carefully maneuvering through a tough stretch of underbrush, we were soon near the swamp's edge. Reluctant to go farther for fear of spooking the bird, we crouched low in a nearby thicket, our hearts pounding as we tried to collect ourselves.

After we had calmed down a bit, Lee whispered, "I'll try calling the ol'boy."

I nodded in agreement and moved quietly to a ridge that was 25 yards to his left, just in case the gobbler approached from that direction. There I watched the scene unfold. ▷

With his shotgun safely cradled in the crook of his arm, Lee took out his box call and began making a short series of high, pleading *yelps*. The tom, by then close to us, readily responded. He was definitely interested and was moving aggressively toward us. Lee placed the box call on the ground with an economy of motion.

Breathlessly, we waited—but not for long.

Within a few seconds, the grand bird emerged from the swamp on Lee's side. He reacted quickly and connected with the fine Florida gobbler on his first shot. Jackpot! There was turkey dinner with all the trimmings that night.

This scenario is one that is familiar to many Florida turkey hunters. Of course, we sometimes go home empty-handed, but that's just part of turkey hunting. It is still a sport that is steeped in tradition and one which requires much patience, considerable skill and more than a little luck.

The wild turkey is a part of the fabric of recent American history, having served as an important food source for the first colonists and countless other Americans since then. Indeed, Ben Franklin believed the turkey should be our national emblem. Native Americans had long harvested wild turkeys for food prior to settlement here by Europeans.

However, modern man has not always acted in the best interest of the wild turkey. Uncontrolled hunting threatened the turkey's survival during our nation's early years, and this eradicated the wild turkey from much of its original range. Moreover, as time passed, land development and urbanization usurped much of the species' natural habitat.

Had there not been concerted efforts to conserve and restore our dwindling wild turkey population, it might have shared a fate similar to that of the American bison. But fortunately, such is not the case, thanks to improved game management techniques and strict hunting regulations. Today, the prognosis for the wild turkey's survival is bright.

In Florida, successful efforts to revitalize the state's wild turkey population began in the 1930s and 1940s. Since some areas of the state had more turkeys than others, birds were captured where they were plentiful and relocated to other areas where they did not range, but where there was suitable habitat. This made more efficient use of available game and habitats.

Additionally, numerous public wildlife management areas have been established to preserve land for wild turkeys and other game animals. These management areas in Florida are under the direct supervision of the Commission. Today, the Commission reviews and modifies hunting regulations to ensure an optimum number of birds for breeding and hunting. This is a sharp contrast to those early days of unrestricted shooting.

At present, Florida provides turkey hunting during its fall gun and archery seasons and during special spring gobbler hunts. Spring gobbler hunts are not offered at all wildlife management areas, but there are enough areas which do have a spring season that you may enjoy the sport.

During the fall, turkeys of either sex may be harvested, with a daily bag limit of one and a season bag limit of two. Wildlife management areas such as Bull Creek, Three Lakes, Apalachicola, La Floresta Perdida and Camp Blanding usually offer good public hunting.

Florida's wild turkey population has not been precisely determined; however, some experts believe the number probably now exceeds 100,000. Few would disagree that there are considerably more wild turkeys in Florida now than there were 35 years ago. This has been a direct result of improved management.

Progress in curbing man's negative impact on wild turkeys notwithstanding, natural threats such as predation and disease still remain. Many wild turkey nests are destroyed each year by raccoons, skunks, opossums and other natural causes before the eggs hatch.

Viruses, infections, parasites, and spring rains—which flood nests—also endanger the lives of young turkey poults. For this reason, wildlife biologists are conducting important research to determine what can be done to minimize these natural dangers.

Presently, there is growing concern in Florida over habitat losses resulting from an increasing human population and attendant land development. As this trend continues, the good turkey hunting which has been long enjoyed in the Sunshine State could diminish.

In Florida, efforts to revitalize the wild turkey population began in the 1930s and 1940s.

Although there is more than one way to find wild turkeys, veteran Florida hunters often locate flocks by looking for their distinctive tracks and droppings in terrain that is abundant with nuts, acorns, seeds and other foods favored by these large birds. Oak hammocks and swamps are good places to start.

If you find evidence wild turkeys are in the vicinity, make an effort to locate their roosting areas. This requires careful listening at dusk for their yelping or the telltale heavy sounds of wings as they fly up to their roosting trees. Once the area is pin-pointed, you can return in the dark of morning to wait for legal shooting time in nearby cover. Being quiet is essential because wild turkeys are extremely wary. But if you position yourself well, you may get an opportunity to bag your spring gobbler soon after dawn.

Spring gobbler hunting is especially exciting. During the spring mating season, gobblers voice their yearning for hens. Similar to the fall hunting, experienced hunters attempt to locate areas that male birds are using. In the spring, gobblers also may be easily persuaded to show themselves by gentle coaxing with a turkey call. The fervor of response of spring toms can be quite an experience!

Clearly, a turkey call is an important tool of the successful hunter and there is a wide variety available at many sporting goods stores. Which type to buy is a matter of individual preference. Written instructions are usually provided, and sales personnel at the store where a call is purchased may be able to offer tips on using the call. Some old-timers make their own calls—a craft which requires special talent and experience. One word of caution, however, a call that's improperly used can do more harm than good.

A 12-gauge with full choke barrel and number 4 shot is my choice for turkeys. A number of turkeys are also taken each year by experienced archers with bows and arrows. As in all hunting, safety and sportsmanship are always paramount.

My first outdoor experiences as a boy were those occasions when Dad took my brother and me turkey hunting. Of course, Dad did all of the hunting then, as we were too young to do more than just tag along. It was a challenge for us two kids to keep still in a cold, predawn turkey blind; but we wouldn't have missed it for the world. Those trips are special memories. Now there are times when I take my own son turkey hunting—when all is quiet in the forest—that those days with Dad somehow don't seem so long ago.

Hopefully, through continued research and successful wildlife management techniques, such experiences will always be available in Florida.

PATCHING UP

A family picked up much more than just an old box turtle.

By John Waters Jr.

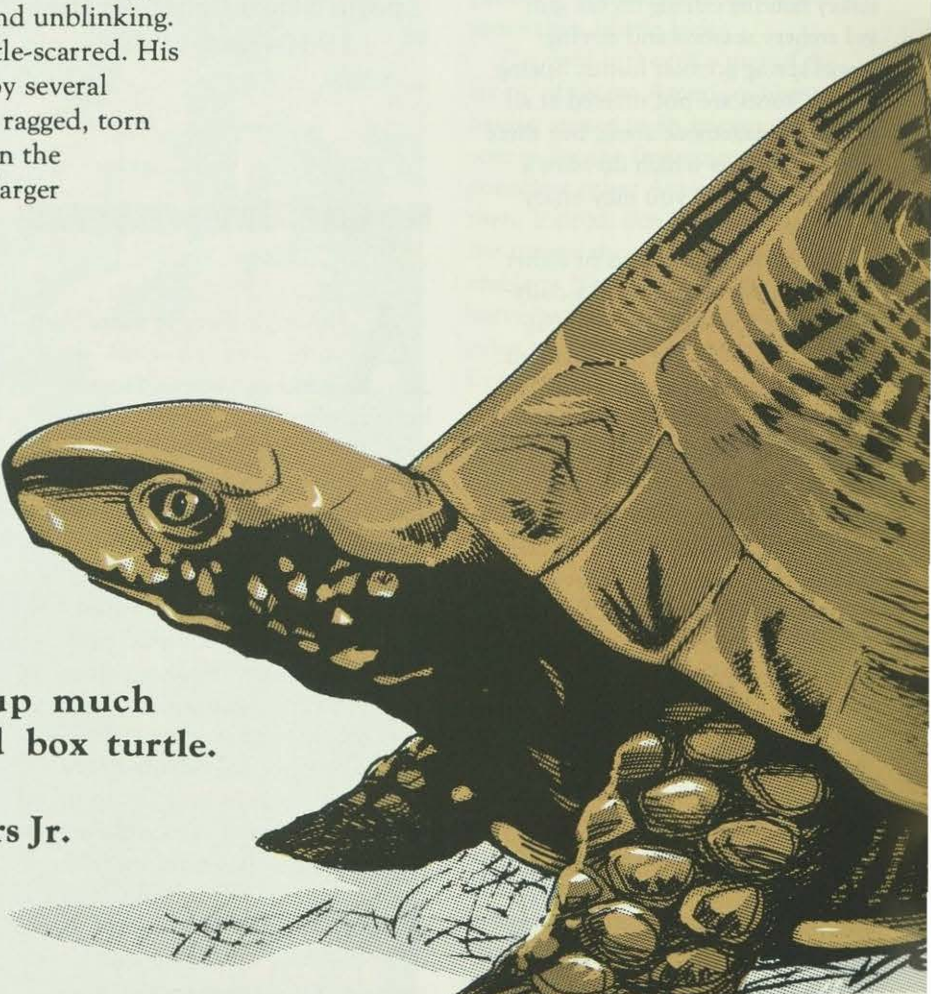
He was slowly lumbering across U.S. 441 near the historic town of Micanopy when I spotted him in the traffic, way back in 1978. His characteristically domed shell and relatively small size immediately identified him as a box turtle, even with the trailing streamer of vegetation that was clinging to him.

I imagined one of the big semi-trailer rigs squashing him into the pavement, so at the next cross-over in the road, I turned around and went back. When I picked him up, I knew immediately that he was a very special animal, and that he must be *exceptionally old*, even for one of his species.

Unlike other box turtles I have picked up, this one did not draw into his shell and close up. Instead, he stretched out his slender wrinkled neck, turned his head toward me and looked right into my face. His eyes were bright and unblinking.

He was not only old, but also battle-scarred. His shell was worn smooth, blemished by several grotesque puncture holes and it had ragged, torn edges. My guess was that he had been the unfortunate intended prey of some larger carnivorous creature—a big dog perhaps. It was along one of the ragged edges of his shell that the vegetation had caught, adding to the turtle's load and probably slowing him in his journey to wherever he was going.

Ordinarily, I would have been inclined to simply get the turtle out of the road, safely onto the shoulder, but I carried him home. John III, Jimmy and Jean were 12, 10 and eight years old then, and I knew they would enjoy seeing that old turtle. As with me, he showed no fear when they picked him up, looked at him curiously and set him free inside the house. He proceeded to crawl all over the place, never once withdrawing into his shell as he explored the spaces under beds and furniture.



OLD GRANDPA

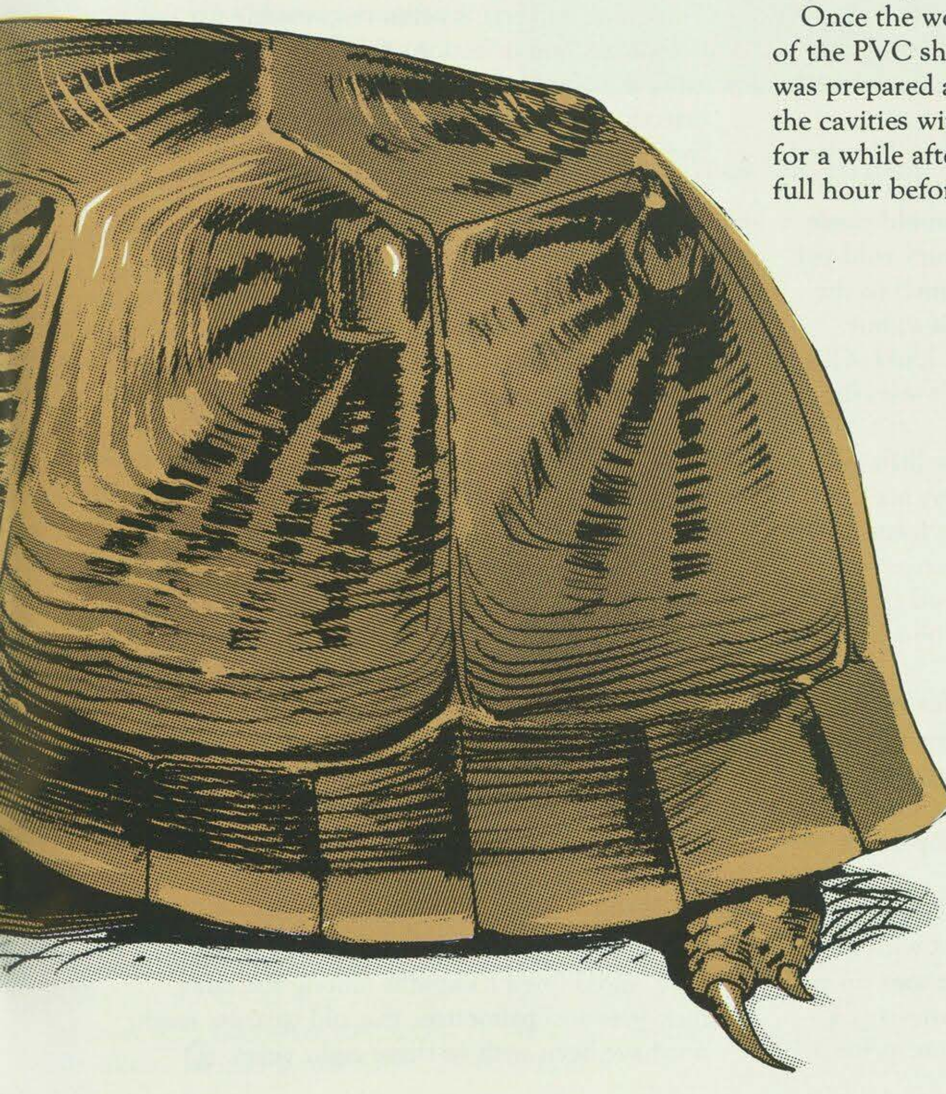
My wife Nancy had become accustomed to my habits of catching things, but she was unaccustomed to critters staying inside the house. So, I promised to set him free, "Just as soon as we can patch up his shell." Meanwhile, the little people had loads of fun watching "Old Grandpa," as they named him, explore their world.

The shell "surgery" was scheduled for the next day, with John III and Jimmy to act as assistants. All the instruments were neatly laid out on newspapers spread over the dining room table, and the boys had carefully scrubbed the patient's shell with warm soapy water and an old toothbrush. As they worked, I made some long-lasting "cavity filler" material by taking a piece of grey-colored PVC pipe and rasping off a small pile of thin, pliable shavings.

This adventure occurred about the same time as our growing family was learning about dentistry—the grinding, filling and polishing aspects of the profession. So, when I explained that we were going to fill Old Grandpa's cavities, they knew what was involved. Jean chose not to watch when the "drilling" began.

A small, cone-shaped carborundum burr was selected to clean the holes and taper off the ragged edges of the old tortoise's carapace. Although it made noise and vibrated Old Grandpa through and through, it was harmless since there is no nerve tissue in the shell. It didn't take long, and Old Grandpa watched as much of the work in progress as possible, never once retreating into his shell.

Once the wounds had been smoothed, a mixture of the PVC shavings and five-minute epoxy resin was prepared and gently but firmly paddled into the cavities with a popsicle stick. We released him for a while after this to allow the resin to set for a full hour before we used the burr again to polish ▷



The children named the box turtle "Old Grandpa" and turned him loose in the house.

John Waters Jr.-Photograph

off the work so the fillings matched the natural contours of his shell.

The box turtle stayed with us a few more days, in a special cage in the garage, eating his fill of fresh apple slices and high-protein lubber grasshoppers. He seemed to prefer the insects more than the fruit, but ate a fair amount of both foods. After this final care, we released him to roam free on our seven acres of Florida hardwood hammock.

It was a couple of years later before I saw Old Grandpa again. One day, as I was walking slowly through our woods after a rain, looking for whatever, we met near a patch of palmettos. I picked him up to check the fillings, found them solid and set him free again. As before, he looked me over as I held him.

Another couple of years passed before I learned that the new neighbors just down the road from us had an eight-year-old son who had "an old turtle with a patched-up shell" for a temporary wild pet. It was Old Grandpa. I naturally explained to the boy and his dad about the turtle's visit to our home and how the shell was repaired. Later, Old Grandpa was released again and wasn't seen for about three more years.

Since the day of the shell repair, the little people have grown up, and John III and Jimmy are driving. It was just a few days ago that John III was driving his old van around a little curve in our two-lane dirt driveway when he stopped quickly. Old Grandpa was crossing the road. John III parked and caught him again.

He saved the friendly old creature for me to check, as by now some of the fillings had worked loose. The old boy is still as friendly as ever, and I know a quick patch-up might even last him the remainder of his life, although we really don't know his age.

We learned a few things from Old Grandpa, beginning with our first day of contact with him. First, we found that he had only three toes on each of his hind feet. *Terrapene carolina triunguis* is a subspecies which has only three toes on its hind feet, instead of four. But this characteristic is also sometimes found on other box turtle species including *Terrapene carolina bauri*, the Florida box turtle, which seems to be Old Grandpa's species. We also tried to imagine what the old creature may have experienced in his life. His tameness made it easy to picture some young boy or girl once keeping him for their pet, until they lost interest and turned him loose.

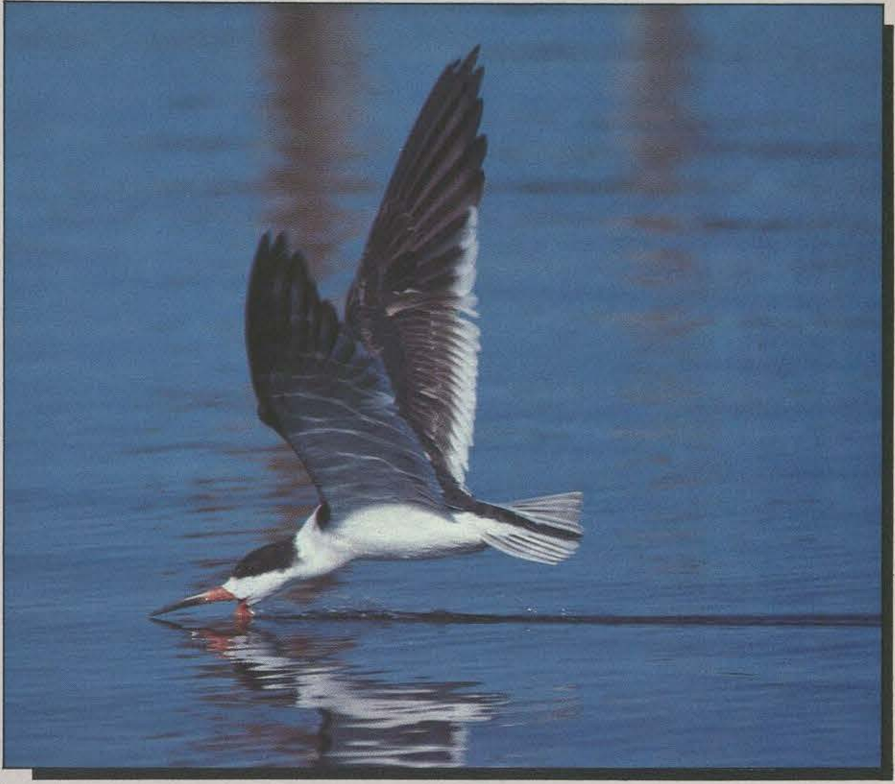
Box turtles, although gentle and mild mannered, do not make good pets. Like other small species of turtles which are sometimes captured and caged up, they are often contaminated with *Salmonella*, a bacteria which can cause severe illness in humans. This same bacteria is often responsible for food poisoning, and infections from *Salmonella* can be fatal. Also, box turtles are prone to other bacterial infections which cause their heads to swell and their eyes to secrete fluids or close up. They just don't do well in captivity.

Unfortunately, box turtles are nevertheless a very popular item in the world pet trade, and considerable numbers of them are being taken from the wild and sold. There is reportedly a demand for American box turtles as far away as the Orient, and as a result, hundreds are exported by air freight to these and other markets.

We also learned that this species has been known to live for as long as 138 years in captivity, according to one field guide, and it was very easy to think Old Grandpa was maybe a century old. He looked every day of it. The box turtle is the longest-lived of the North American vertebrate species. The genus, *Terrapene*, apparently goes back to the Miocene.

Perhaps the most significant lesson learned from our treasured but brief moments with Old Grandpa is *the importance of habitat to the survival of wild living creatures*. Without a place to feed on his preferred diet of plant and animal matter, the availability of water and suitable cover for winter resting, and the safety of woods disturbed only by faint, moss-lined footpaths among the oaks, hickories and palmettos, this old tortoise might not have been with us these eight years.

Delicate Balance


Michael Francis-Photograph

Species: Black Skimmer (*Rynchops niger*)

Florida Status: Future populations could become threatened by coastal development.

There are plenty of ways to catch a fish. Gill nets, cast nets, cane poles and spinning rods and reels are several ways used by determined Florida fishermen. The black skimmer, however, is a serious local "angler" of another sort. This species has just one way to snare its scaly supper, and unfortunately, the black skimmer may be running out of fishing holes in Florida.

An unusual bill and an aerodynamically efficient body make up the black skimmer's specialized fishing tackle. Other birds may dive, swim, stalk, spear or scavenge in order to land a fish dinner, but black skimmers capture nearly all their food by skimming along the surface of the water, close to the shore, with the elongated lower half of their bills immersed. When the bird's bill touches a fish, often a small mullet, one quick snap dispatches the prey.

A skimmer may glide without a wingbeat for 150 feet or more, its bill cutting the water, before it rises several feet to begin again. Skimming is usually performed into the wind, and a bird may work back and forth over a single tidal pool for 20 minutes or more. Foraging alone or in a small, compact flock, skimmers fish most actively at the changing tide, often in the evening or at night.

Since skimmers are tactile feeders and find their prey through touch, they have to be particular in selecting their fishing territories. Biologist Barbara Black found that Gulf Coast populations mostly skim in water four to eight inches deep, and within seven feet of a mudflat, reef or marsh's edge.

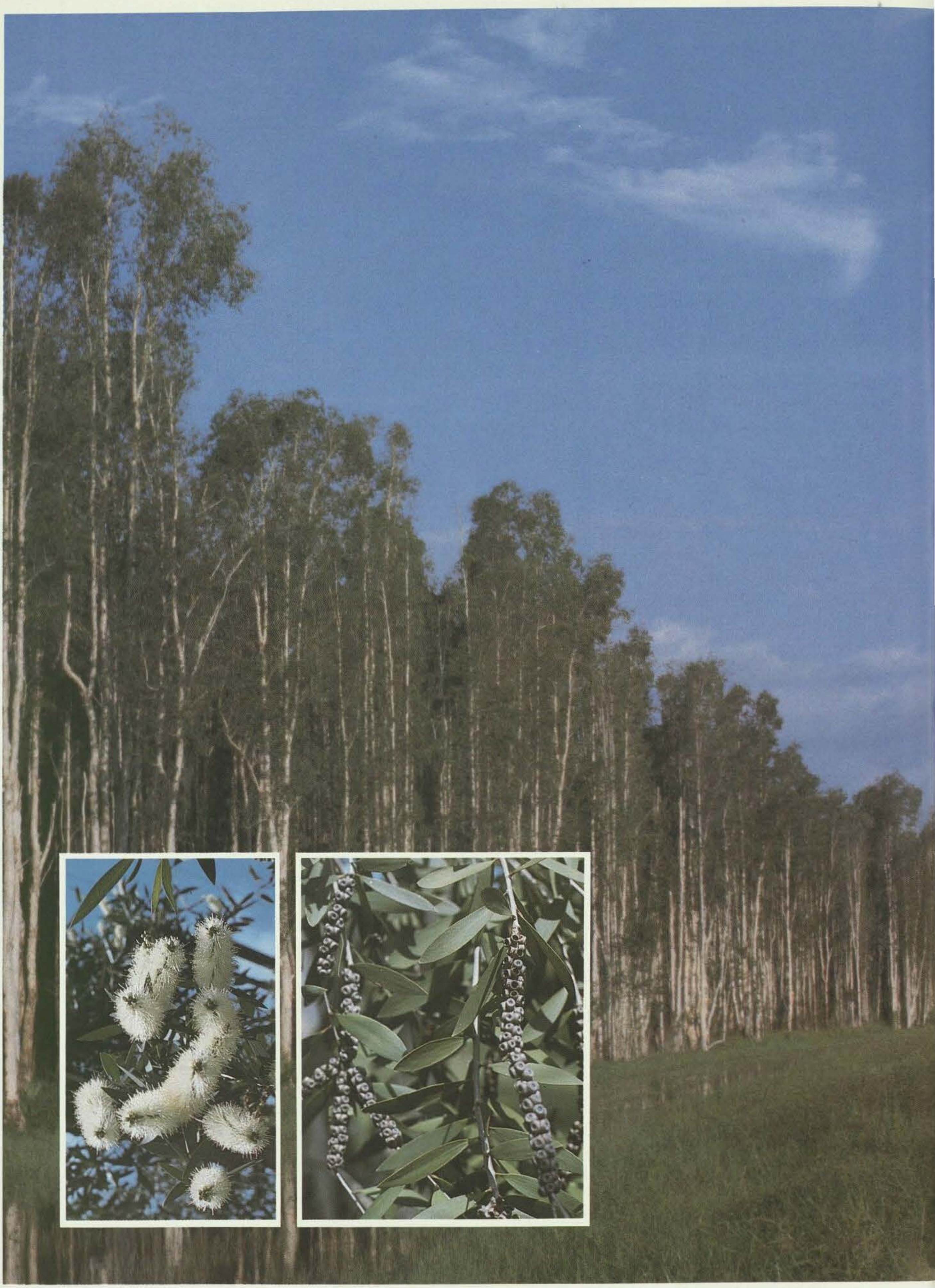
"In these areas," explained Black, "fish are trapped within a shallow water column where their chances of downward escape are minimized. By limiting its fishing to these shallow waters, the skimmer works at maximum efficiency."

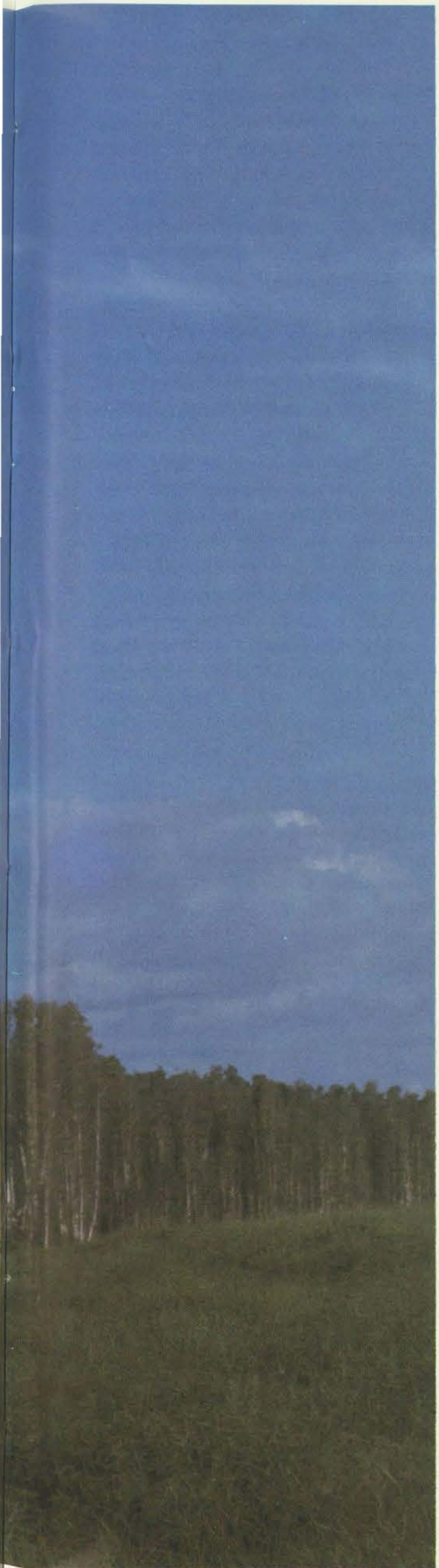
Nobody knows exactly how many black skimmers live in Florida, or whether their numbers are stable. Skimmer populations vary according to season. Many birds that nest farther north migrate to Florida for the winter, so local populations swell in that season. During the last decade, breeding populations of skimmers were documented on both coasts of Florida as far south as Fort Myers. Undisturbed barrier island beaches and dunes, and secondarily, spoil islands near estuaries, are the preferred nesting grounds for skimmers. Human disturbance, natural predation on young and eggs, and bad weather are major causes of nesting failure in skimmer colonies.

If you've ever seen a black skimmer, you'll agree that it's a Florida resident worth protecting. The factors that may threaten its existence are things that make Florida less special to human residents as well. Development of barrier islands destroys habitat and incremental pollution of coastal waters reduces fish populations. Channelization of tidal areas also degrades the unique feeding habitat of not only skimmers but many estuarine animals.

Next time you mull over your fishing choices—saltwater or freshwater, net or pole, or even a stop at the seafood market—remember the black skimmer. It has only one way to catch a fish—and one specialized habitat in which to do it.

—Susan Cerulean





MULCH

A Solution to the Melaleuca Invasion

By John Waters Jr.

Photographs By Dex Bender

When Dex Bender was a boy growing up in the northeastern Alachua County lakeside village of Earlton, beside the 4,721-acre Santa Fe Lake, cypress trees were something completely familiar to him. The lake is surrounded by tall, majestic, gray, Spanish moss-laden cypresses. Among the buttressed trunks and tall, tapered knees of those trees, Bender learned about bass, bream, shiners, alligators, ducks, wading birds and many other critters.

He was a young man attending college, becoming a professional biologist/ecologist, when he began to acquire more knowledge about cypress trees and many other native plants that grow around our lakes and in our wetlands. He studied and learned about the invisible but extremely important processes of cleansing surface water that wetlands perform, and just how valuable cypress and other trees are as living elements in our delicate ecosystem. His studies also taught him that even small wetlands play biologically active roles in removing impurities from surface water. These impurities today include hundreds of chemicals and other pollutants that flow into our wetlands when rainwater falls and flows along or just below the ground surface. ▷

Melaleuca is an undesirable exotic which was imported to south Florida about the turn of the century. Since then, it has become a major pest which has almost no value to wildlife. Some areas have extensive monocultures which crowd out more valuable native species.

Scientific studies of cypress stumps and core samples from living trees indicate that it takes about 100 years to grow a tree having a main trunk diameter of only one foot. Because mature cypress trees have trunks that taper outward at their bases, diameter is measured at the part of trunk where the tapered, conical base ends and the trunk becomes more columnar in shape.

Two species, pond cypress and bald cypress, occur naturally in Florida. Pond cypress is smaller, with diameters seldom exceeding three feet or so, but bald cypress has been known to reach diameters of nearly 12 feet at a point about 11 or 12 feet above the bottom of the base.

During Florida's early years of modern settlement, giant cypress trees were common in our wetlands, and because the wood of both bald and pond cypress is so valuable for construction, the state's once virgin stands were heavily logged. When commercial harvesting first began, the largest trees were not harvested because of the unavailability of equipment capable of moving such gigantic logs. The early harvesting techniques, for example, depended on lumberjacks swinging hand axes and mule trains to pull logs from where they were felled.

However, as technology provided our industrialized society such equipment as bulldozers, power-operated saws and massive winches, even the largest of the oldest trees were felled to supply a ready market for cypress wood. In the years since these modern harvesting techniques were developed, more and more uses for cypress and, consequently, increased demands for cypress products have entered the commercial marketing scene. One of these demands is for cypress mulch for use on ornamental plantings around homes and commercial buildings all over America. Modern wood chipping equipment now makes it possible to process even the smallest cypress trees into mulch and chip products.

Because of its high resistance to rot when in contact with the ground, cypress mulch has become a preferred mulching material by many landscapers and home owners. It is also attractive, and it does a good job of keeping down excess growths of unwanted weeds, preserving soil moisture around the roots of cultivated trees and other ornamentals, and it helps retain soil around the roots of these plants.

"Just for cypress mulch alone," Bender explains, "as many as 50 acres of Florida's cypress trees are gobbled up each day."

In addition to harvesting for use in wood products, live stands of cypress in Florida now have significant competition from human activities other than logging, especially when the wetlands in which cypress naturally grows are drained for such uses as agriculture and construction of roads and buildings. There is also serious biological competition from the exotic melaleuca tree. This pest tree was imported from Australia about the turn of the century and has since become a major problem in much of south Florida. One of its local names there is "the punk tree," and it grows well in the subtropical climate.

Bender says, "South Florida now

Melaleuca is a fast-growing tree, which thrives in both upland and bottomland habitats, above. In some areas, it is displacing our native cypress trees. Forestry Resources Inc. harvests melaleuca and processes it into mulch and trail cover which is as good as cypress, below. This is a viable use for melaleuca, which has proved to be worthless for other uses such as making furniture and paper.

has an estimated half-million acres of melaleuca, and some areas have essentially pure monocultures of this fast-growing tree that cover as much as 50,000 acres. It literally takes over the native trees and crowds them out."

Melaleuca is considered by many ecologists and conservationists to be a major threat to the Everglades, where it is slowly but surely encroaching into areas that used to have extensive sawgrass cover or other native flora. Marjory Stoneman Douglas, author of *River of Grass* and president of the nonprofit Friends of the Everglades conservation organization says, "Melaleuca is the greatest single menace to the outer lands of the Everglades, the Big Cypress Swamp and Everglades National Park."

Unlike cypress and most other native tree species, melaleuca has practically zero benefit to wildlife. And in dense stands, it builds up a thick layer of leaf litter that poses a distinct threat to adjacent native plant colonies because the melaleuca litter burns so easily. However, melaleuca trees are quite tolerant of fire and tend to survive burning, then populate the fire-killed areas where other species may have grown before burning.

There is much concern for this highly undesirable tree, and major efforts to eradicate it so far have all failed. Although herbicides will kill melaleuca, using them is very expensive, and the chemicals must be applied directly to each tree. Even though trees can be cut down, their roots will grow new sprouts that become trees again in a short time. To complicate matters, when melaleuca is disturbed by cutting, it releases millions of very tiny seeds that scatter all around the area. Many of these germinate, and the cycle begins again.

Although melaleuca also grows on high ground, where it competes with highland tree and shrub species, it is potentially far more detrimental in wetlands. Unlike cypress, which grows very slowly, melaleuca grows rapidly, and in the process, it absorbs and transpires much greater volumes of water than cypress. Consequently, melaleuca can dry up a wetland, and when this happens, species that depend on water can no longer survive there. This thick-growing exotic also forms such a dense canopy of leaves that the ground below is completely shaded from sunlight. This results in many species that need higher levels of sunlight becoming severely stunted in their growth or dying out.

Many ways of turning melaleuca into useful products have been tried, including using the wood for furniture and other wooden goods; however, the wood cracks when it dries. Other uses, such as paper making, have also proven unfeasible or simply uneconomical.

Bender, however, has found a viable and desirable use for melaleuca. And to demonstrate his idea, he has founded Forestry Resources Inc., a company in Fort Myers. Capital and management support were provided by the Wilbur Boyd Corporation of Bradenton. Bender's company cuts down the pest trees and chips them up to make landscape mulch and ground and trail cover. Marketed under the tradenames of Florimulch and Florichips, the idea has proven to be very practical and these products are rapidly gaining popularity. Bender explains that, "Melaleuca has natural oils that keep the mulch from decaying rapidly, and this makes it a good material for use in making mulch.

"Compared to cypress mulch, melaleuca mulch lasts about the same length of time under the same conditions," he adds.

Bender's idea has been welcomed by many because it offers a practical way to help eliminate melaleuca without harming the environment. He is negotiating with some government agencies to remove melaleuca from public lands, and in other cases, he is harvesting melaleuca from private lands.

Douglas says Bender's plan has her "enthusiastic support and is welcomed by all Floridians concerned for so long with the melaleuca danger and loss of native Cypress."

Bender also has other ideas. "I want to do more than just harvest the melaleuca. What I am researching now is a better way to restore my harvest sites with cypress seedlings or other desirable native plant species.

"To remove an exotic species which has little or no value to wildlife and replace it with native species that offer reasonable benefits to our wildlife resources is a major goal of this research."

Dan Grant Has a Nothin' Pole System

By W. Horace Carter

His friends address Dan Grant with respect, especially when they talk from boat to boat among the lily pads during bream bedding season in central Florida. In reality, they follow him around, observing where and how he puts his bait in the "faces" of bluegill and shellcracker, because all the natives are aware of the classic success of this 30-year-old expert. Grant catches limits day in and day out while others complain that the fish are "on vacation or else suffering from an acute case of lockjaw." Not so with Dan Grant. He catches plenty because he has unlocked a secret. He has used it successfully since he was just a boy growing up in Gainesville.

After taking a lesson from the Daddy Rabbit of the "nothin' pole" style of catching bream, Willie Sanker, Grant has adapted that system and refined it to a point that he is today's master of landing 50 bream with tackle that costs almost nothing. You see, Grant uses cane poles that have been discarded by other anglers after they broke off a foot or two of the limber end. The way he fishes, he wants a stubby pole, and these are just right after suffering a break.

Grant uses a pole that is never more than eight or nine feet long, and which is so stiff that even the most gallant shellcracker comes flying through the air after biting Grant's enticing baits. This fisherman seldom loses his fish, even when he dangles bait in the thickest water lilies or holes among the grass. He gives them no chance to run and tangle but, instead, brings them up, out of the water and into his humble boat.

"I usually catch my limit any time around the full moon in April, May and June," Grant confides.

He has simply added to a system that Sanker mastered a decade ago when he said, "Corks are made to put in medicine bottles, and lead is made for use by plumbers. You don't need that stuff on your fishing lines."

Grant takes Sanker's advice seriously and he uses long-shank, #4 hooks on a 12-pound-test line. That's all he ties to those junky-looking cane poles he uses—no cork and no lead. When he hooks three or four small grass shrimp on the rig, and lets them slowly sink to the bottom around the lily pads where bream are searching for bedding space, the fish cannot resist. The grass shrimp is a natural bait that panfish feast on in Florida, and it's free and unencumbered when Grant uses this technique. The bream peck on the bait, then run. The angler has a tussle. But with the stubby poles Grant

W. Horace Carter-Photograph

uses, he is almost always the winner and the fish is easily pulled above the surface without the usual tangles suffered by the anglers who have long, limber cane poles which afford the fish too much running room.

Grant is well acquainted with the water in which he fishes. He knows its depth fairly accurately and he ties his line on the pole so that it is a foot or so longer than the water depth. He knows from the distance between the surface and the end of his pole whether his almost weightless bait is on the bottom, just off the bottom or too shallow for bluegill to strike. His sensitive fingers can feel the weight of the tiny bait shrimp on the small hook when it is raised slightly, dangling just off the bottom.

When you are using a cork and lead weights on the line, it's simple to keep the cork set at a distance that keeps the bait just off the bottom. Without this, however, you must depend on feel and be constantly alert. Fish will hit a weightless, bobberless hook two or three times more often than a conventional cork and sinker rig. Sometimes they will hit nothing else, Grant says.

While refining the "nothin' pole" technique, Grant has also learned to handle two and three poles at a time, dropping each bait into one hole after another among the lily pads. He eases his boat along with a paddle or by pulling on the lily pad stems.

When Grant rigs three poles, he holds one in his hand, and lets the other two rest on lily pads that rise a few inches above the water surface. It's not unusual to see him scrambling after one of those poles while also trying to unhook a gripper-size bream from his hand-held pole and line.

There are times, of course, when you can catch just as many bluegill and shellcracker in the central Florida waters with a cork-and-lead rig, depending on the season, the size of the cork and choosing the proper place. During bedding time in May and June, especially around the new and full moons, you can ease your boat into the grassbeds which grow along the edges of many lakes, anchor both ends of your boat, and if there is not too much ripple on the water, you can catch fish by dropping your hooks baited with grass shrimp a few feet from the grass out in the open water. Bream, scouting for bedding space, are usually along the fringe of cover then.

It is important in this type of fishing to have patience. Often you will set your poles in place and wait for 10 or 15 minutes before anything happens. Then you may catch a dozen bluegill or shellcracker in a matter of minutes. They begin biting good only when the sun is high in the sky. They do not seem to be early takers when you are fishing this way.

Crickets, another popular bait for Florida panfish, are also productive outside the grass line, but they are not as productive as live grass shrimp in the cover. Crickets fished in the open, and wriggled a foot or two off the bottom, will entice bluegill to gulp them down, but shellcracker rarely hit a cricket. Crickets become a more productive bait in late summer, and bream will hit them better in June and July than they will in April and May.

During the few days before the full moon in April and again in September, the shellcracker usually bed over wide areas of lily pads and grass cover in central Florida. Bluegill will continue to make beds during the summer months, but most shellcracker concentrate their reproductive efforts in spring and fall. When they are on the beds, you can fish a mudworm wriggler near the bottom, and few shellcracker will withstand the temptation to bite it. Sometimes there is only a slight movement of the cork, or a slight pull with Grant's rig, that signals something is tampering with your bait. You set the hook and struggle. Grant regularly fishes with mudworms for bait during the shellcracker bedding season, and with success.

While Grant's fishing experiences have largely been confined to a few central Florida lakes, his technique works well in almost any lake or river. One of the best bream holes in Florida is the area around King's Bar in Lake Okeechobee. There is also excellent fishing in the reed and lily beds near the mouth of the Kissimmee River, where it enters this big lake, and in the canal on the west side near Clewiston.

Railroad Cove and Treasure Island in Leesburg's Lake Griffin have been prolific shellcracker and bluegill sites for a generation. Helena Run, a short creek that crosses under Highway 27, just south of Leesburg, and empties into big Lake Harris, has some gripper-sized bream that like to gobble shrimp. Little Lake Harris, Lake Yale and the myriad of orange grove ponds in the Howey-In-The-Hills region are loaded with bream that will bite all year.

Blue Creek at Astor Park, a tributary off the St. Johns River, has been excellent bluegill territory. So are lakes George, Dexter and Woodruff. The canals and roadway ditches along the Tamiami Trail in southern Florida are filled with panfish that make great gourmet meals. Madison County in northern Florida also has bountiful supplies of bluegill, and Lake Jackson in the panhandle region has some good bream fishing. The panhandle region also has Merritts Mill Pond, the place where Florida's State Record (also World Record) shellcracker was caught. It weighed four pounds, 10 ounces.

There are equally productive bream hideouts along the Gulf of Mexico. Both the eight-mile-long Homosassa River and Crystal River have good populations of bream.

The Withlacoochee River is usually so clear that you have to sneak up on the shellcracker and bluegill. You can stalk them around the cover and catch fish in five- and six-foot-deep water. The equally clear Panasofkee is good bream water and often, on a still day in a protected cove, you can see the shellcracker pick the bait off the bottom. Other waters around Dunnellon, like Lake Rousseau, and Tsala Apopka at Inverness, offer excellent fishing.

There are countless good places to catch bream in Florida and they can be caught using Dan Grant's simple method.

SECRETS OF THE UPPER APALACHICOLA

By Max Hunn

The Apalachicola River meanders across the narrow Florida panhandle from the Georgia state line to the Gulf of Mexico for a distance of more than a hundred miles. In its sometimes rushing, sometimes sauntering trip to the sea, it affords excellent stream fishing—a rare commodity in the Sunshine State, which is more famous for its lake fishing than its river fishing. Although the Apalachicola offers top-flight, challenging angling, its fishing potential is unknown to many anglers.

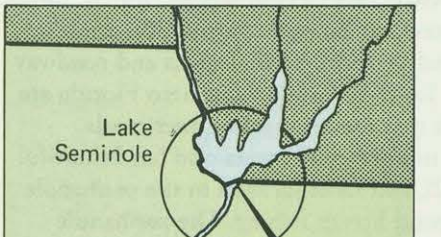
The upper third of the river—extending from below the Jim Woodruff Dam to Blountstown—is overshadowed by the better known Lake Seminole, which is formed by a dam that impounds Georgia's Flint and Chattahoochee rivers. These are the headwaters of the Apalachicola. Lake Seminole is widely known, but the upper Apalachicola isn't. Locals know the fishing is excellent, but they're not exactly broadcasting their knowledge. After all, what angler wants to reveal the exact location of his favorite fishing hole?

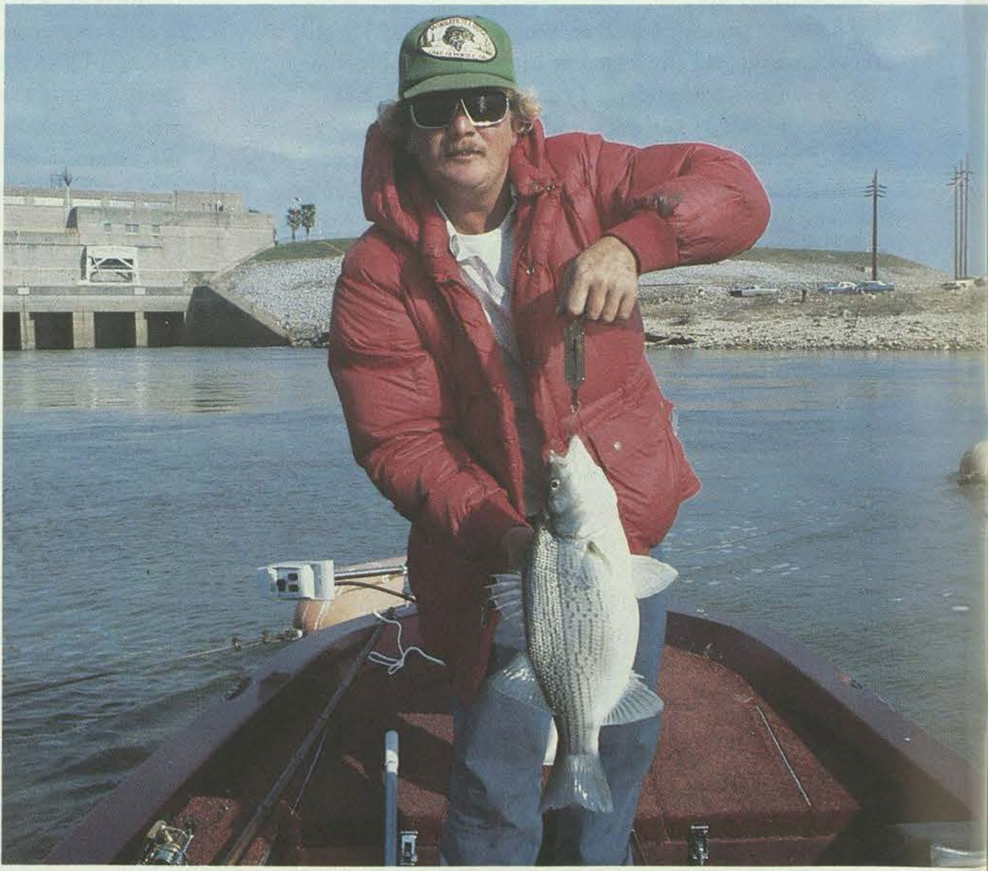
You gain an idea of the river's potential by checking Florida's official records for freshwater fish. Records for five of 24 species have been caught in the river. The present seven-pound record coosa or redeye bass (*Micropterus coosae*) was caught in these waters. The record spotted bass (*Micropterus punctulatus*), weighing three pounds and seven ounces, came from this section of the Apalachicola. A 16-pound, five-ounce sunshine bass (a hybrid between the striped bass and white bass) also came from the Apalachicola, and the experts won't be surprised if this sunshine is replaced by an even larger catch. The world record sunshine is 20 pounds, six ounces.

Other Florida records from these waters include the white bass (*Morone chrysops*) at four pounds, 11 ounces and the carp (*Cyprinus carpio*) at 40 pounds, nine ounces.

I doubt there are any waters in Florida which afford a more extensive piscatorial menu than the Apalachicola River. In addition to these State Record catches, anglers have landed striped bass, also called rockfish (primarily being the Gulf strain), and largemouth bass weighing more than 12 pounds. Some very nice American shad, which make annual spring runs up river, have been caught. You also can seek Suwannee bass (a rare species found in only a few Florida streams), garfish, bowfin, catfish and such panfish as bluegill, shellcracker, stumpknocker, redbreast and warmouth.

Despite this variety, catching these various fish is not





Max Hunn-Photograph

as easy as spearing them in a barrel. You have to know where to fish and you need to understand the waters and use the proper lures.

While you may encounter many of these species most anywhere in the river, certain ones tend to frequent certain areas. If you want to fish for stripers, then the waters immediately below the Jim Woodruff Dam are the prime location. Your chances are best when the hydroelectric plant is generating. The stripers, hybrids and whites congregate in the turbulent water below the dam and feast on bait fish which are swept through the turbines. There's a catwalk on the east bank where many fish have been landed. Favorite baits are live eels or shad, as I learned when fishing below the dam with Marty Butler, who guides from his base in Chattahoochee.

The best artificials are heavy jigs—¾ and one ounce—in order to get down in the swift water; heavy spoons; and Little George-type sinking lures with spinners. You anchor your boat in midstream below the warning barrier and cast into the swift water, letting your bait or lure sink.

As your bait or lure sweeps downstream over the rocky bottom, foul-ups are frequent, so you need stout lines. Even with strong lines, you will lose hooks and lures frequently. It can be expensive tacklewise, but it's all part of the game. You have to fish where the fish are.

However, if you're seeking largemouth bass, then the procedure is different. This is primarily drift fishing, and the river current will move your boat along rapidly, particularly if the power plant is generating. Local experts say visiting anglers have a tendency to fish too fast, and that they compound this error by moving their boats even faster with their trolling motors.

Talk to veteran Apalachicola anglers such as Butler, or Jerry Shelby, a ranger with the U.S. Army Corps of Engineers and a dedicated river angler, and you learn there are three factors that are keys to fishing success: accuracy, knowledge of the bottom and lure presentation. One look at the casting targets, particularly the numerous brush piles which have limbs sticking out in all directions, and it's obvious why casting accuracy is vital.

Knowing the bottom is also important. Fishing a mud bottom is useless even if brush piles are there. Instead you'll do better to look for clean bottoms—either sandy or rocky—which have adequate cover. Rocky banks with sheer drop-offs are good, as well as brush piles and snags.

You won't be on the river long before you'll notice one feature is missing. Downstream from the dam to Blountstown, the river has sharply defined shores, usually with high, often rocky banks. There are few overflow swamps or creeks entering the main river in this part. This situation is far different than around the Apalachicola delta, where there are numerous creeks, cut-offs and overflow swamps—places where fish can hide except during exceptionally low-water periods.

Lure presentation is very important. It's not only a question of accuracy to avoid fouling, but the Apalachicola's bass seem to want *action*. This is no place for the lazy, teasing retrieve which is so often successful elsewhere in luring the bucketmouths into hitting. Fast retrieving is customary on the Apalachicola.

Most Apalachicola anglers prefer deep-diving crank baits. You retrieve *fast* in order to make your lure dive deep quickly. This depth is important because the bass here seldom hit consistently on top. When you cast to a brush pile or other submerged hideaway, you have to get your lure down fast.

Crank bait colors are governed by the conditions of the water. Black-and-silver are favored in clear water, and gold or crawdad in dingy water. There are even times when flourescent-orange produces.

Unlike most bass waters, the prime fishing time is not governed so much by the time of year as by the river's height. Fishing is best when the water depth is eight to eight and one-half feet at Blountstown. This is medium stage. The Apalachicola sometimes gets as low as four feet and as high as 20.

You may encounter favorable water levels at any time of the year, depending upon how much water is being used to generate electricity at the Jim Woodruff Dam, and also what the water level is in Lake Seminole. Heavy rains upstream in the Chattahoochee and Flint watersheds raise the lake and the Corps of Engineers controls the lake's level by discharging into the river.

At times, the river's water level acts like a yo-yo because of flood conditions or generating requirements. This is not a prime fishing period. The best catches are made when the water level is fairly constant with no rapid fluctuation.

While crank baits are generally the main artificial lures, spinner baits are also widely used. They have the advantages of fouling infrequently and for running deep. Blade and skirt colors follow the usual pattern of silver-and-white for clear water; and yellow, gold or chartreuse for murkey water. The 3/4-ounce spinner bait is preferred because it sinks fast and deep retrieves are most productive.

Plastic worms are rated number three because of the stream current. With the river usually moving fairly rapidly, it's difficult to detect a light tap of a worm pick-up. However, there are quiet eddies and some quiet water around rock groins where worms do produce. Blue is a highly favored color, followed by black and grape. In extremely fast water, the Little George-type fast-sinking tail spinner and heavy slab spoons work well.

It's easy to launch a boat to fish this part of the river. There's a ramp capable of handling three boats simultaneously a short distance downstream from the U.S. 90 bridge in the town of Chattahoochee. The dam is only a short distance upstream from the launching site if you intend to fish for stripers and hybrids. You can begin floating downstream for bass as soon as you're launched.

The upper Apalachicola River may lack widespread recognition but it doesn't lack a variety of fish. Take your chances and hold onto your rod!

Fill In The Blanks

Freshwater Fish Record Update

By John Waters Jr.

Five slots remain without a *certified* record in FLORIDA WILDLIFE's State Record Freshwater Fish Program, and you have a chance to fill any or all of these blank spaces in the state's official freshwater list. These are the species still waiting for certified recognition:

SPECIES	MINIMUM QUALIFYING WEIGHT
Largemouth bass (*Micropterus salmoides*)	**14 pounds**
Speckled perch (black crappie) (*Pomoxis nigromaculatus*)	**3 pounds**
Chain pickerel (*Esox niger*)	**6 pounds**
Alligator gar (*Atractosteus spatula*)	**70 pounds**
Florida gar (*Lepisosteus platyrhincus*)	**5 pounds**

We have *noncertified* records for the largemouth bass, speckled perch and chain pickerel, but we do not have *certified* catches for these in our list.

To further explain how *certified* records differ from *noncertified*, a certified record is one that bears a Commission fisheries biologist's signature, certifying to us the species identification for the fish described on an official application form. Also, an authorized Commission employee must conduct the official weighing of the fish on a scale that bears a current inspection certificate from the Florida Department of Agriculture and Consumer Services.

The three noncertified records in our official list are believed to be legitimate catches, based on verification by witnesses who saw the fish weighed and other acceptable evidence which has been received by FLORIDA WILDLIFE following the magazine's 1976 formalization of the official record program. Records for both the speckled perch (3 pounds, 12 ounces, caught by John McGilvray in Newnans Lake [Alachua County] on December 29, 1964) and the chain pickerel (8 pounds, caught by Jimmy James in Lake Talquin [Gadsden County] on July 5, 1971) were recognized in this way.

A largemouth bass record (19 pounds, caught by W. A. Witt in Lake Tarpon [Pinellas County] on June 26, 1961) was also listed on our first State Record list. It stayed there until Bill Baab, a newspaper reporter for the *Augusta Chronicle* (Augusta, Georgia), did some extensive research and dug up the old written records for a 20-pound, 2-ounce largemouth which had been caught by Frederick Joseph "Fritz" Friebel in Big Fish Lake, a private pond having no public access, in Pasco County in May 1923.

Baab was working on a story about the World Record largemouth, which was caught in a Georgia lake, when he wondered what record that catch had beat. Records indicated it was Witt's 19-pounder, which had been caught in Florida. Baab's next quest was for the record Witt had beaten. Hoping to find the answer, he searched through old newspapers and early issues of *Field & Stream*, going way back into the 1920s. It was there that he learned that the 20-pound, 2-ounce bass Friebel caught had been listed in the 1923 *World Almanac and Book of Facts* and in earlier editions of *Field & Stream* magazine, then apparently forgotten.

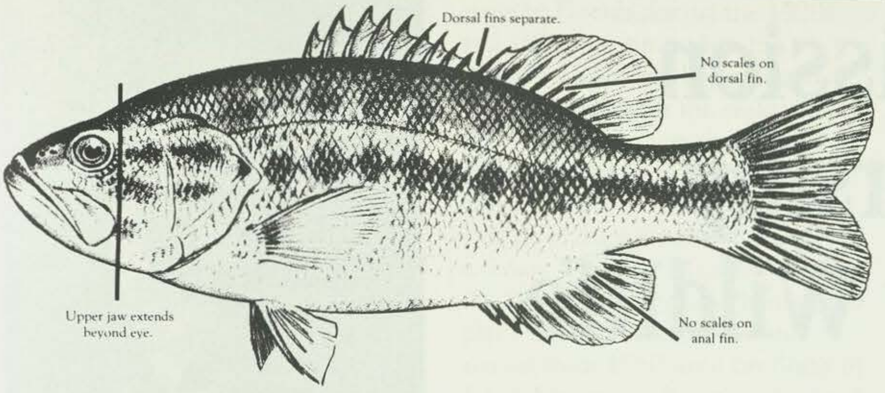
Although "Fritz" Friebel was no longer alive, his brother Walter Friebel was, and he signed an affidavit attesting to the weight, which was measured on a Toledo meat scale at a grocery store in Tampa. To support this, there was also an old photograph of the giant fish being held by "Fritz" himself. The giant bass was displayed, frozen in a solid block of ice, in a small Tampa grocery store for a short time following the catch.

Thomas Vaughn and Norman Young of the Division of Fisheries studied the photograph and made measurements of the image of the fish. Vaughn and Young joined FLORIDA WILDLIFE in agreeing that the record of Friebel's bass was probably as reliable as our known record of the Witt fish. As a result, Friebel's bass became recognized as the present largemouth bass record (noncertified) for Florida.

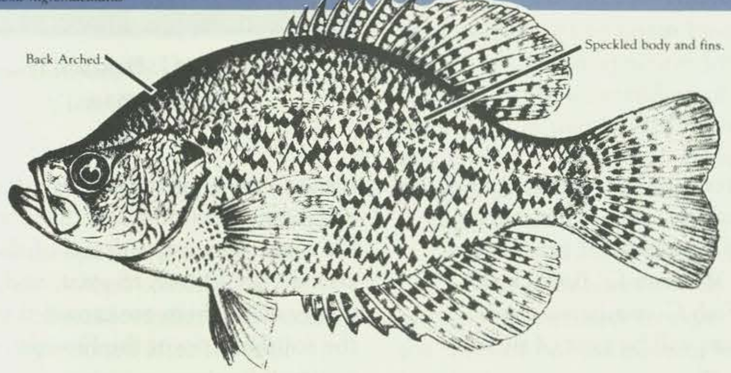
Of the present list of 24 eligible freshwater fish recognized in the program, 19 are certified records. We thought it would be even better if all the records were certified, so we're inviting you to help us reach that goal. Here's all you have to do:

First, naturally, you have to catch one of the five fish named above, and it must equal or exceed the minimum qualifying weight. Then, call the Game and Fresh Water Fish Commission at one of the five regional offices (telephone numbers are listed on page 48) and tell them you have a fish eligible for

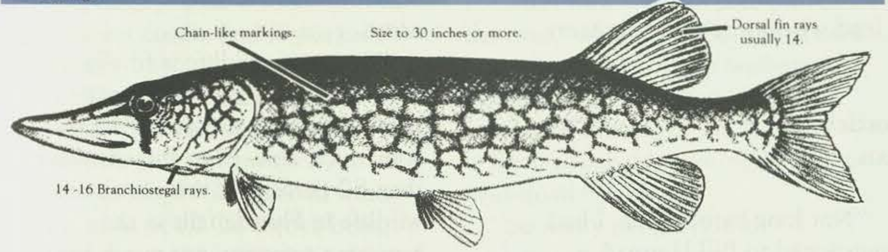
LARGEMOUTH BASS — **Minimum qualifying weight 14 pounds**
Micropterus salmoides


Dorsal fins separate.
No scales on dorsal fin.
Upper jaw extends beyond eye.
No scales on anal fin.

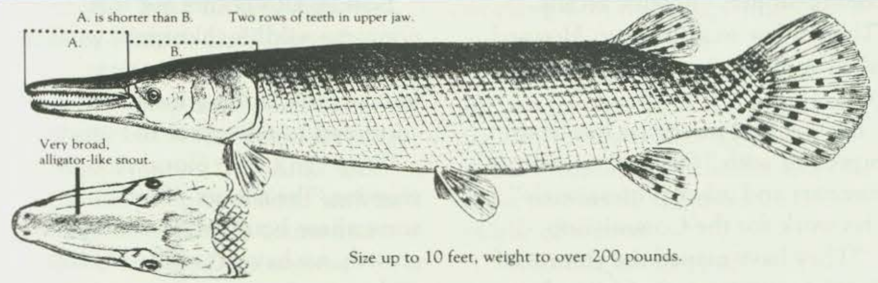
BLACK CRAPPIE (speckled perch) — **Minimum qualifying weight: 3 pounds**
Pomoxis nigromaculatus


Back Arched.
Speckled body and fins.

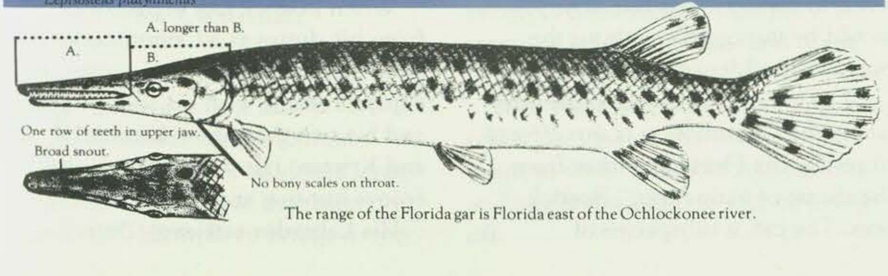
CHAIN PICKEREL — **Minimum qualifying weight: 6 pounds**
Esox niger


Chain-like markings.
Size to 30 inches or more.
Dorsal fin rays usually 14.
14 -16 Branchiostegal rays.

ALLIGATOR GAR — **Minimum qualifying weight: 70 pounds**
Atractosteus spatula


A. is shorter than B.
Two rows of teeth in upper jaw.
A.
B.
Very broad, alligator-like snout.
Size up to 10 feet, weight to over 200 pounds.

FLORIDA GAR — **Minimum qualifying weight: 5 pounds**
Lepisosteus platyhinchus


A. longer than B.
A.
B.
One row of teeth in upper jaw.
Broad snout.
No bony scales on throat.
The range of the Florida gar is Florida east of the Ochlockonee river.

recognition. Arrangements will be made for the appropriate Commission personnel to assist you with the formal application procedure.

The major rules that apply are as follows:

1. Fish must be legally taken in Florida waters by a sport fishing method (such as a cane pole or rod and reel), and you must display a valid Florida fishing license for the date of the catch. If the catch is made on a cane pole by a Florida resident fishing in his county of residence, no license is required. Florida residents more than 65 years of age and children (including nonresidents) less than 15 years of age are also exempt from the license requirement. After June 1, 1986, children under 16 years old will be exempt.

2. The fish must be unfrozen when inspected and weighed, and the carcass will be subject to both internal and external examination, as may be deemed necessary by the fisheries biologist or other authorized Commission employee.

3. The Commission reserves the right to photograph the fish.

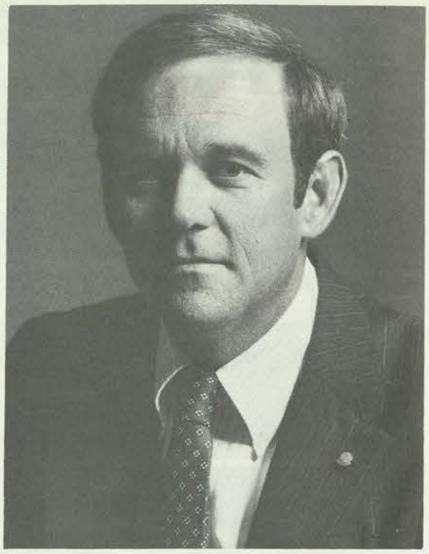
4. A notarized, fully completed Official Application Form must be received by the editor of FLORIDA WILDLIFE and accepted.

There are a few other stipulations, such as rules for rounding off weights and linear measurements.

So, now that you know FLORIDA WILDLIFE has spaces for five new State Record Freshwater Fish, why don't you enjoy a day of fishing? You can't find a better place than Florida to do it and you might make a record catch!

Commission Leadership Works for Wildlife

By Henry Cabbage



Wm. A. Greer-Photograph

William G. Bostick Jr., Chairman

Increasing human population and resulting alterations to the land have whittled away much of Florida's wildlife habitat and other natural resources; however, the state is in the midst of planning for preserving and, in some cases, restoring the wilds of Florida. William G. Bostick Jr., the new chairman of the Game and Fresh Water Fish Commission, and Mrs. Gilbert W. Humphrey, the new vice chairman, will be part of these plans.

Bostick and Mrs. Humphrey have both witnessed the environmental decay brought on by Florida's population boom, and they believe that what they have seen during recent decades will lend wisdom to their decision making as leaders in the Commission.

William G. Bostick Jr., Chairman

William G. Bostick Jr., who recently assumed chairmanship of the Commission, represents the fourth generation of his family to hunt and fish in Florida. He is beginning his second five-year term as a Commissioner.

"My father used to take me small game hunting back when I was a teenager," Bostick recalls. "So much has changed since then. So many new challenges have materialized, and we're fortunate to have a state agency with as many professional employees as the Game and Fresh Water Fish Commission. All of them are working to protect what we have."

Bostick, a 38-year-old executive in his family's Auburndale trucking company, replaced Dr. Don Rhodes on the Commission when Rhodes' term expired in February 1981.

"Not long before then, I had mentioned to Bill Howard, a member of Governor Bob Graham's staff, that I would enjoy serving as a Commissioner," Bostick recalls. "Then, a few months later, Howard called and asked me if I was serious. I was."

Bostick said he always has been impressed with "the high caliber of scientists and other professionals" who work for the Commission.

"They have earned the respect of Florida's citizens and of our other state agencies," Bostick says. "That is of great benefit to our ability to work to conserve wildlife. The job would be impossible without the public's confidence.

"The greatest challenge currently facing the Commission is our efforts to rescue the Florida panther from the threat of extinction," Bostick says. The cat, a subspecies of cougar, is one of the most critically endangered mammals in the world. No more than a few dozen of the animals are known to exist, and nearly all of them are crowded into the southern tip of the Florida peninsula.

Many other challenges also confront the Commission, Bostick notes.

"Nongame wildlife is finally getting more of the attention it needs," Bostick explains. "That's something new. Even though more than 80 percent of the vertebrate wildlife in Florida falls in the nongame category, not much has gone into studying and protecting these species until recently."

Bostick also points out that nongame wildlife, like game wildlife, is suffering from the dramatic human population growth that continues to take place in Florida.

"You can't stop Florida from growing," he admits. "But somewhere between growth and no growth, we have to strike a balance with room for management and protection of wildlife and its habitat."

When Bostick can break away from his duties as a Commissioner and trucking company executive, he enjoys hunting with his son, Bill III, and his two daughters, Kimberly and Kristen. His wife, Cheryl, also enjoys hunting and fishing.

His Labrador retriever, Bear, is a

Wm. A. Greer-Photograph

Mrs. Gilbert W. Humphrey, Vice Chairman

pretty good hunting dog, too, he says.

"We named him after the late Alabama football coach, Bear Bryant," Bostick explains. "I've had other dogs named after football coaches, but they weren't all that great. I figured that to get a good hunting dog, you have to name him after a great coach, and it worked," he jokes.

Bostick also owns a couple of quarter horses, and he finds time to play a little golf and root for his favorite football and baseball teams.

But, most of all, he enjoys being close to nature. "I hope to be able always to hunt and fish in the Florida wilderness the way my great-grandfather did," he says with the same hope for his children and others who live in Florida.

"I'm honored to be part of preserving our wildlife resources for future generations," he said, "and I'm pleased to be associated with an agency like the Florida Game and Fresh Water Fish Commission."

Mrs. Gilbert W. Humphrey, Vice Chairman

Half a century of experiencing the natural wonders of Florida's outdoors lends a dynamic perspective that Mrs. Gilbert W. Humphrey brings to the Commission. She recalls hunting game in Florida during the 1920s and 1930s—a time when the country was barely beginning to come to grips with the realization that wildlife can vanish quickly without strict protection and wise management.

Mrs. Humphrey, a tall, stately woman, lives near Miccosukee on the Woodfield Springs Plantation, a place she and her late husband shared from 1960 until his death in 1979. She enjoys being surrounded by the massive native trees and many beautiful wildlife species that inhabit this part of north Florida, and it was her compassion for wildlife and understanding of conservation that landed her an appointment to the Commission in 1984. Currently, she is the Commission's vice chairman.

"By the time I was eight years old," Mrs. Humphrey recalls, "I had my first opportunity to experience the thrill of bobcat hunting with my family during our visits to Florida and southern Georgia.

"The chase was the part I loved the best," she says. "Galloping on a horse behind a pack of well-trained hounds in pursuit of game—that was quite a thrill for me."

Even today, Mrs. Humphrey is an avid quail hunter.

"So many people don't understand the importance of the hunter's role in wildlife conservation," she notes, "so working with that problem is one of my personal priorities."

Mrs. Humphrey believes that human technology and progress and wildlife habitat preservation are equally important priorities and that these matters all require a lot of public education.

"With the intensity of development we have in Florida today, we can't ignore the effect it has on wildlife," she says. "Human progress commands a high price in terms of wildlife habitat, and when habitat is lost, wildlife is lost."

Mrs. Humphrey said she hopes to offset the "rather narrow-minded point of view" that without hunters and anglers, wildlife would be better off.

"If it weren't for hunters and anglers—and the money they spend on licenses and taxes on their equipment—there would be almost no funds to preserve the habitats that are vital to wildlife," she explains. "The era when nature needed no assistance from humans ended a long time ago."

Even though Mrs. Humphrey cares so much and knows so much about wildlife and conservation, her lifestyle includes many other interesting facets. Besides her love for wildlife, she also has a special place in her heart for the arts—particularly opera. Currently, she is the president of the Metropolitan Opera Association in New York.

She's also zone vice president of the U.S. Equestrian Team and a fox hunter. And she's been known to take the helm of a two-masted schooner.

"I've always loved being around a variety of people and relating to them on a variety of subjects," she explains about her many interests.

This afternoon, you might spot her standing around in a country store, discussing shotguns with a group of local sportsmen, and by tonight, you might find her hosting dinner for some of the world's most talented opera performers. Then by tomorrow, she may be firming up strategy for the Wildlife Legislative Fund of America or making decisions about projects for Tallahassee's Tall Timbers Research Station Inc.

Spare time doesn't come often to someone who leads such an intense and interesting life, but when Mrs. Humphrey does manage to find a few minutes of her own, she likes to spend them with the few dozen beagles of British ancestry that she raises on her plantation. The dogs are among her most treasured possessions because of their bloodline. (Editor's Note: FLORIDA WILDLIFE featured the Humphrey's "Woodfield Beagles" in the March 1973 issue.)

Mrs. Humphrey is the first woman ever to serve a five-year term on the Commission. She replaced Cecil C. Bailey of Jacksonville after his term expired.

It's The Law

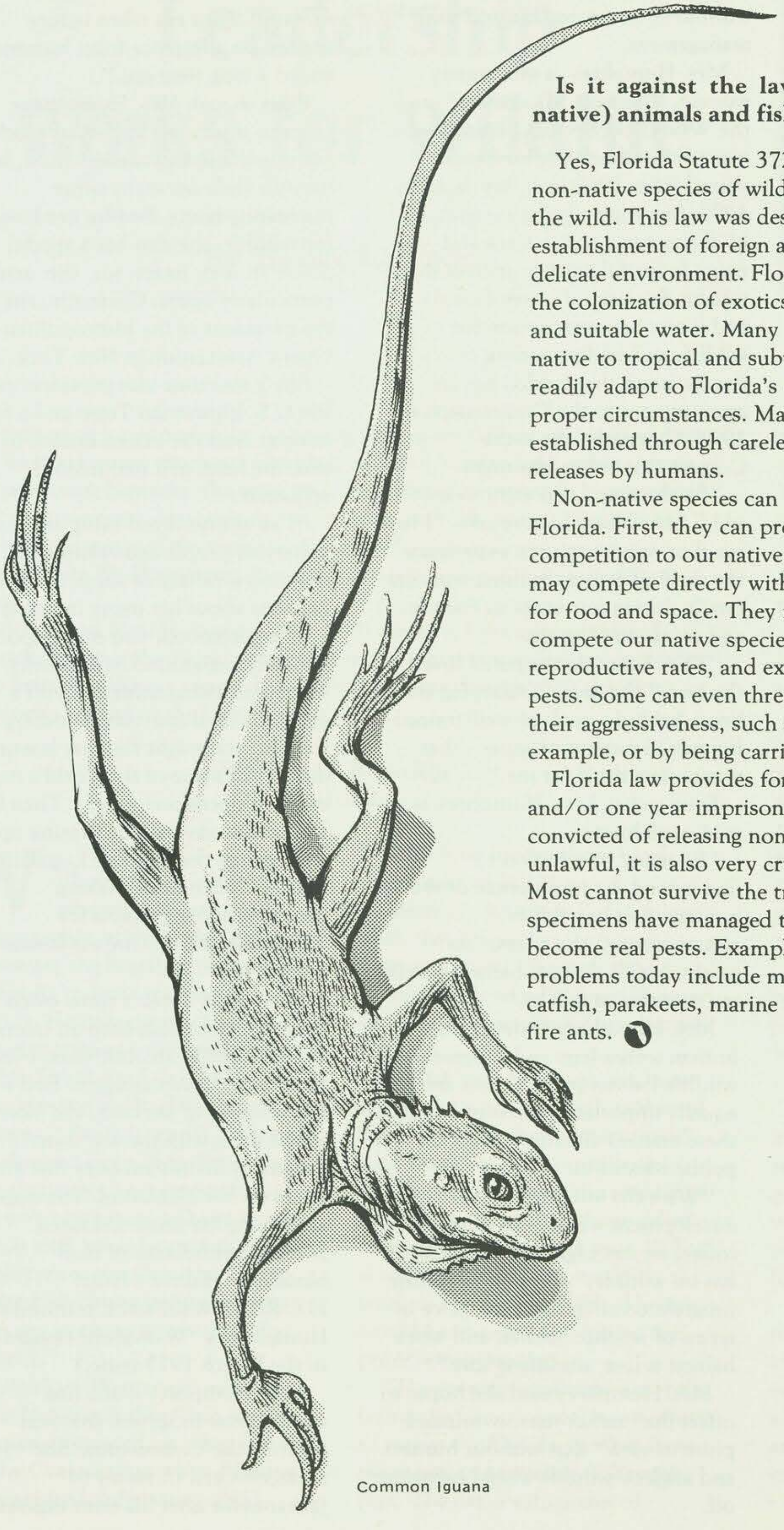
By Major Kyle Hill

Is it against the law to liberate exotic (non-native) animals and fish which are kept as pets?

Yes, Florida Statute 372.265 prohibits the release of non-native species of wildlife and freshwater fish into the wild. This law was designed to prevent the establishment of foreign animal species in Florida's delicate environment. Florida is especially vulnerable to the colonization of exotics because of its mild climate and suitable water. Many plants and animals that are native to tropical and subtropical areas of the world can readily adapt to Florida's environment, under the proper circumstances. Many have already become established through careless handling and intentional releases by humans.

Non-native species can present numerous hazards to Florida. First, they can prey on or provide keen competition to our native species. For example, they may compete directly with native fish or wildlife species for food and space. They may also be able to out-compete our native species because of higher reproductive rates, and exotics can become agricultural pests. Some can even threaten human safety because of their aggressiveness, such as the flesh-eating piranha, for example, or by being carriers of foreign diseases.

Florida law provides for penalties of up to $1,000 and/or one year imprisonment for individuals convicted of releasing non-native species. Besides being unlawful, it is also very cruel to the related specimens. Most cannot survive the trauma, but a few hardy specimens have managed to survive well enough to become real pests. Examples of exotics that cause problems today include muscovy ducks, walking catfish, parakeets, marine toads and South American fire ants.



Common Iguana

Hunter Education News

By Dick Dale

After years of lugging rifles, shotguns and fishing tackle in the great outdoors, I was going back to school—a school for hunters.

In early September, the Commission announced that a Hunter Education Program would be conducted in my county and that all ages were invited to attend.

Ego being what it is, I rationalized that to one who has trotted on snowshoes in zero-degree weather with a rifle or shotgun in hand and, more recently, pushed through palmetto patches in search of game, there was little anyone else could teach me about the risks, rigors and responsibilities of hunting.

Nevertheless, I had to go and see what Hunter Education was all about, and, perhaps, see if "an old dog" could really learn new tricks.

At the appointed hour, I was signing on the dotted line, very happy to note that our group of both men and women included a few others with more than a touch of gray in their hair. There were also not-so-olds, the young and the very young.

Facing us, however, were gentlemen of militaristic mien who, in the early minutes of the program, advised us there would be a test at the end of the course. I am sure my face blanched.

Whatever fears I harbored were short-lived. Through the following hours of the course, I developed a sincere appreciation for the teaching ability of Hunter Education volunteer instructors.

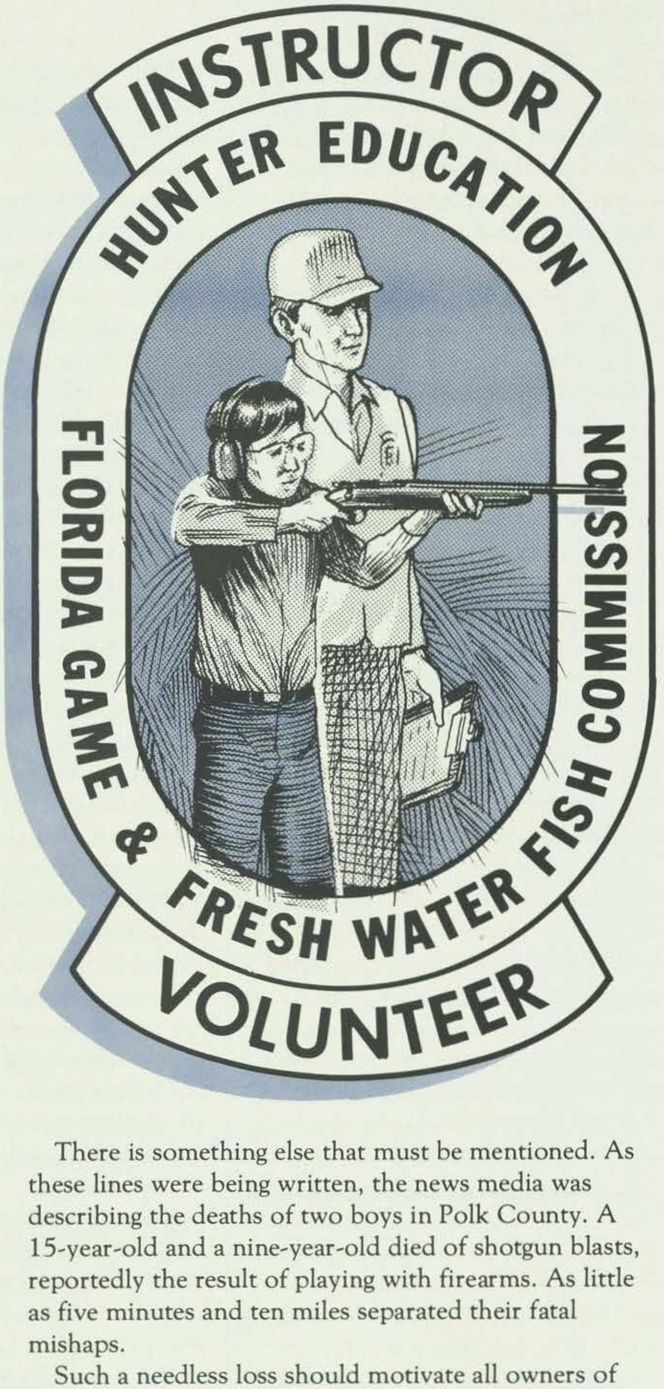
The program's sessions became audience-participation affairs. Reviews of classes consisted of questions being posed to the students—sometimes in challenging good humor. Instructors moved from young to old, carefully phrasing terms and maintaining understanding as they deftly fielded questions.

"There are no dumb questions," we were assured. "There are only dumb answers. Ask questions!"

I was particularly impressed with the patience exhibited in the nonpatronizing attention given to the young. Explanations were complete and understandable.

We were guided through modern guns, muzzleloaders and archery, all with constant attention to safety. The course also extended to survival in the wilderness, first aid and the risk of hypothermia. I am sure all the participants learned a great deal!

I think recognition is due to all of those who have helped shape the future hunting and other outdoor experiences for so many new, and not so new, hunters. Here are their names: Lt. Gene Newman, chief hunter education instructor; Lt. Byron Stalvey, hunter education officer; Wildlife Officers Tommy Young, Jim Smith, John Partain, Lew Carpenter, Scott Phillips and volunteers Andy Freund and Matt Wall.


INSTRUCTOR
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There is something else that must be mentioned. As these lines were being written, the news media was describing the deaths of two boys in Polk County. A 15-year-old and a nine-year-old died of shotgun blasts, reportedly the result of playing with firearms. As little as five minutes and ten miles separated their fatal mishaps.

Such a needless loss should motivate all owners of firearms to attend the continuing course of instruction offered free by the Commission. The keynote is safety and the dangers of mishandled weapons. Take the course and take your young outdoor enthusiasts. It may help save a life!

EDITOR'S NOTE: Mr. Dale's complimentary comments on his participation in the Hunter Education program were unsolicited.

Conservation Update

Compiled by John Waters Jr.

U.S. Supreme Court Rules for Wetlands

The U.S. Supreme Court ruled in early December that the federal government has broad powers to control development of millions of acres of American swamps, mud flats and marshes which are adjacent to the "Waters of the United States." The ruling was unanimous by all nine Justices.

The decision stemmed from a Michigan case originally filed by the U.S. Army Corps of Engineers under the federal Clean Water Act (1972), which requires developers to acquire permits from the Corps to dredge and fill certain wetlands.

The ruling is viewed as a victory by many conservationists because many of the wetlands in this country are on federal lands. Although a number of states have local laws similar in scope to the federal Clean Water Act, these do not necessarily apply to federally owned lands within those states.

A considerable amount of development which affects wetlands on nearby federal land has either been started or has been completed on privately owned lands. The new ruling will help keep developments under the permitting requirements of the Clean Water Act and other federal laws which protect the environment. ☐

***Water Use Experts Calculate** that Broward County uses some 331 million gallons of water daily from their only source of potable fresh water, the Biscayne Aquifer. Their calculations also indicate the recharge rate of the Biscayne is only some 268 million gallons per day.*

Housing Project for Bluebirds

The National Audubon Society and Westvaco Corporation, a major timber company, have announced a cooperative project to provide easy-to-assemble house kits for bluebirds. They will sell for $10 each, postpaid, and proceeds will be used for Audubon's endangered species and other wildlife conservation activities.

Florida is one of many states where bluebirds nest and the state has one of North America's three species, the eastern bluebird, present in substantial numbers. However, bird experts note that there has been a steady decline of bluebird populations since the 1930s. Some estimates indicate there may be only 90 percent of the bluebirds here now that were here 50 years ago.

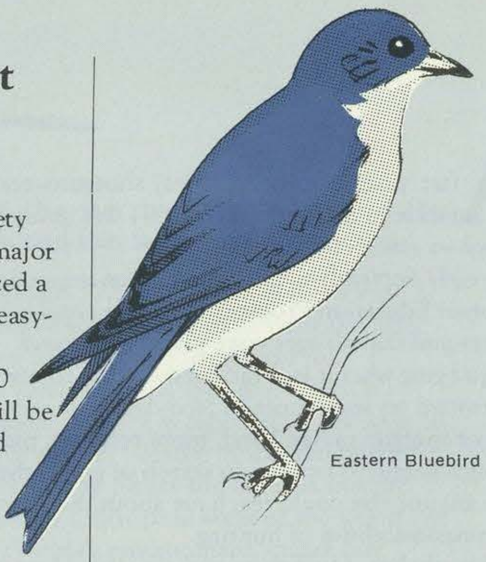
Lack of suitable natural nesting sites is considered to be a major reason for their decline. They are cavity-nesters which lay their eggs and raise their young in holes in dead trees and other natural sites. Properly constructed artificial cavities, such as birdhouses provide, are readily accepted by bluebirds.

Also important for their survival are winter food sources. Berry-producing trees and shrubs are valuable to this species, especially in winter months.

Starlings and English sparrows, unprotected species in Florida, damage bluebird populations by competing for nest sites and by preying on eggs and young nestlings.

You can order your pre-cut kit from: National Audubon Society, P.O. Box 1268, Charleston, SC 29402. They are made of durable cypress, and only a hammer is needed for assembly. ☐

***Nongame Wildlife Programs** in 31 states collected $8.9 million in 1984.*



Eastern Bluebird

Only Three Condors Remain in the Wild

Only six California condors were known to be living in the wild, and three of them have been trapped by California Fish and Game Commission biologists. The captured birds joined 21 others at zoos in Los Angeles and San Diego. One of the three, a female, died from severe lead poisoning in late January.

The Condor Recovery Program hopes to restore the nearly extinct, rapidly dwindling population of this species. The condor once spread its nine- to 10-foot wingspan over much of the western and southern United States, including Florida, but in recent years, they have only been observed only in California's Ventura and Kern counties.

Captive breeding and successful return of the offspring to the wild seems to be the last hope for this species; however, man-made changes in their natural habitat will surely continue to have negative impacts on them. ☐

***58 More Plants and Animals** native to the United States were added to the U.S. List of Endangered and Threatened Species in 1985, bringing the number of these rare forms of wildlife to 390 species for the U.S.*

America's Raptors Are Recovering

During the early 1970s, it was alarmingly clear that America's falcons, hawks and owls were drastically declining in numbers, and in general, suffering effects of pesticide poisoning. Persistent and potent agricultural chemicals, such as DDT and DDD, were found to be a direct cause.

DDT has since been banned from use in the United States, along with certain other chemicals that are known to harm wildlife, after the evidence became clear that it had literally spread throughout the environment at that time. It could be found in dangerously high concentrations in water, soil and vegetative debris, not only near the agricultural fields where it had been used, but often miles away.

Although these chemicals—most all of which are in the organochlorine group—were being used to protect our agricultural crops from insects and other pest organisms, they had the undesirable side effects of also killing birds, fish, mammals and other wildlife. Animals that are at the upper levels of the food chain—including such birds of prey as the bald eagle, peregrine falcon, northern goshawk, gyrfalcon, kestrel, prairie falcon and merlin—were accumulating deadly levels of these chemicals in their body tissues.

This accumulation occurred because these species feed on small animals such as mice, which feed on such foods as grains and vegetation. In their feeding, mice were consuming pesticides that were present in their foods and habitats, then concentrating the pesticides in their body tissues. The poisons then were passing at these higher levels to raptors.

The effects of pesticides on mice and other prey animals often resulted in those individuals that had the most poison in their bodies becoming the easiest prey. Pesticides weaken animals, sicken them and often cause such behavior changes as failing to respond appropriately to danger from predators. The affected animals thus became easier for birds of prey to catch. Similar mechanisms occurred for bald eagles when they fed on fish, a major component of their diet.

Once the cause of raptor population declines had been defined, efforts were made to reverse the damage. Individuals, private conservation organizations and governmental agencies acted to ban the most dangerous of these pesticides from being used in this country and to actively conserve our remaining raptor populations. Much was also done to promote public awareness of the value and importance of our birds of prey.

We are now beginning to see the results of these efforts, which have been well organized for some 15 years now, and they are very promising—even dramatic in some cases. Where the bald eagle was reported in only 39 states some 10 years ago, recent reports show the species currently inhabits all our states except Hawaii, at least during part of its life cycle.

Where the peregrine falcon was critically close to becoming extinct in the wilds of North America a decade ago, an estimated 1,200 of this splendid bird of prey are now in the wild. This represents an increase of about 19 percent over the number counted 10 years ago, but still remains to be such a small number that the species continues to be officially listed as threatened in the United States and endangered in Florida. There are three subspecies of the peregrine falcon in North America, but only the tundra falcon, a subspecies, is found in Florida.

Both the bald eagle and the peregrine falcon have been harmed by modern technology, and then helped to recover, in part, by use of the classical techniques of the sport of falconry.

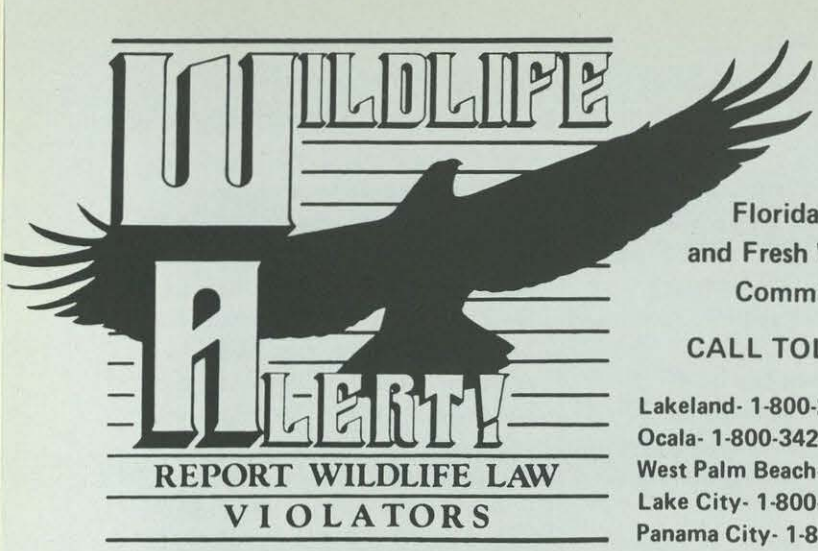
Falconry is a centuries-old sport which uses many effective, harmless techniques for capturing, feeding, holding and training birds of prey to hunt. Although viewed by some uninformed individuals as an obsolete practice which they would outlaw, the laws and ethics of the sport as practiced by falconers in the United States today ensure that birds are well cared for, have adequate food and shelter and can survive normally in the wild when released.

Old techniques for teaching young falcons and hawks to hunt their own food have been used in new restoration projects for both peregrine falcons and bald eagles. These time-tested practices which were once known only to falconers have now become one of the most important rehabitative tools now being used by scientists who are working to benefit our birds of prey. ☐

***Orphaned Animals** which are rescued and cared for by humans often become so dependent on people that they cannot survive in the wild.*

Our Readers Know Florida Geography

Several readers wrote to correct an editing error which occurred in our January-February issue, in the Floridana feature. Although we said Bok Tower sits on the highest natural land point in Florida, we should have said in *peninsular* Florida. The Bok Tower site is only 295 feet above mean sea level, but the highest point in the state, considered as a whole, is near Lakewood in northern Walton County. Elevation there is 345 feet—a 50-foot difference.



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Floridana

Huddled around the fire to keep warm, the hunters slowly roasted a freshly killed bison. Outside the cave, frigid winds blew in dark, gray snow clouds, and the cries of the giant condor filled the air.

Sound like a typical evening in Miami? According to exciting new archaeological findings, it has been suggested that if you were there around 10,000 years ago, just such a scene might have occurred on what is now the edge of Biscayne Bay.

The Cutler Site, a recently-found archaeological deposit situated in south Dade County, is a sinkhole which once was a limestone cave. So far, it has yielded more than 40,000 bits of prehistoric bones and tools. Its treasures document the existence of more than 50 animal species, many of which have never before been found so far south on the North American continent.

Mammoths, bison, lions and wolves the size of Shetland ponies once shared what is now Miami with its human inhabitants at the time of the last Ice Age. Instead of tropical breezes and sunshine, the area's climate then was similar to North Carolina's winters now, dry and cold with occasional snowfalls.

Among the animal bones found were remains of the nearly extinct California condor, *Gymnogyps californianus*, which once graced Florida's skies. The giant condor had a wingspan of 10 feet and weighed up to 50 pounds. The condor was once thought to have inhabited areas only in the western United States, until fossils of this species were found in Pleistocene deposits from the Seminole area, near St. Petersburg, Florida.

Unfortunately, the condor may soon join its Ice Age companion, the wooly mammoth, as just a picture in archaeology books. Only 26 condors—three remaining in the wild—are known to exist.

Florida skies which once had such species as the condor are now astir with jet planes and space shuttles. As our society continually strives to learn more about space and the possibility of life on other planets, it is vital to continue to study life on Earth. It is as important to learn from the past as it is to probe the future for the new discoveries.

—Paige Moody